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MEDICAL DIAL

A Monthly Record of Medicine and Surgery.

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GREETING.

Upon entering our fifth year of the publication of The Medical Dial we desire to thank our friends, patrons and contributors for past favors and courtesies, and wish all a happy and prosperous NEW YEAR.

The Medical Dial appears in its new dress with better quality of paper, and during the present year we hope to enlarge and improve it very materially. Dr. E. H. McIntyre assumes the position of assistant editor, and Wm. R. Dobbyn & Sons take charge of the printing and publishing.

THE MANAGER'S FAREWELL.

Having been associated with the Medical Dial from its inception in 1898, in the capacity of manager, and having come into personal contact with the personnel of nearly all the pharmaceutical houses which have remained the staunch supporters of this publication, at their respective headquarters, and, also, having met with such paramount courtesy at the hands of advertisers and subscribers alike, it is with much regret in many ways that the undersigned leaves the refreshing precincts of medical ethics to devote his entire attention to Metal Miner, a journal of mining which he launched two years ago and has been conducting monthly since.

To his superiors, the Drs. J. W. Macdonald and C. K. Bartlett, and the many other distinguished physicians who have lent a charm to the details of publication by their cordial greetings during the past four years, a parting word of good cheer is most heartily accorded by

Yours very truly,
EDWIN E. GRISWOLD.

The Mortality of Football.

The glorious season of football has come and gone, battles have been fought and won, the dead have been buried and the wounded are in hospitals; some of these are slowly recovering, some are raving maniacs, others are maimed for life. Under the guise of athletic training our colleges are yearly providing a pastime as barbarous as the bullfight, and educating the public in brutality as demoralizing as the prize ring.

The latest returns at our disposal sum up a total of 12 deaths, more than 80 serious injuries, including fractured skulls, injured spines, brain injuries resulting in insanity, broken legs, arms and collar bones, with sprains, bruises and minor injuries without number. This is a terrible price to pay for the benefit which a few students have gained in the way of physical development. That college makes a poor showing which turns out fifty athletes and five hundred gamblers, not to speak of the killed and maimed.

We cannot shut our eyes to the fact that the game is year by year becoming more brutal. One account describes a player as injured by a "kick on the head"; another as "stabbed in the back." There may be some truth in the old saying that "all is fair in love and war," but how much farther could these kicks on the head or stabs in the back be carried before they constituted the crime of murder?

If the game is to continue as the leading feature of college athletics, for the sake of humanity and common decency let these brutal features be eliminated, let the side which wins by such "dirty work" be ruled out of the game, and let the slugger who kicks or stabs be tried in the criminal courts like other ruffians.

But it would be still better if we could replace the game by one free from danger and at the same time secure the physical development of a much larger number. We once witnessed an international game of lacrosse, and a study of that contest impressed us with the idea that for a training in agility and rapidity of action in eye and muscle it is an ideal pastime. In the first place, the costume of the players is graceful and pleasing to the eye of the onlooker—the football player is clothed for wallowing in the mud. The lacrosse players display the fleetness of the deer, the football player the brute strength of the ox. Let us have more lacrosse and less football.

The Football Game.

The football game as now played by the students of our colleges, high schools and other institutions for education is claiming and receiving more attention than any other game or drill except, perhaps, that of the military. Its claims for such enthusiasm and general notice may be considered from several points of view, and its merits and disadvantages noted.

And first as to its claims as an athletic exercise. On this point it may be said, and it will not be disputed, that it is calculated to improve the muscular powers wonderfully in those who are elected to participate in the game, but it can never become a national game in the sense of universality, such as baseball, golf, lawn tennis, croquet and others which are adapted to the average physical health and strength of the majority of the human family. So long as it is usual to select a score or two from a thousand or more students of a college to play, while all the others are only rooters (so-called) to encourage the active members in the game.

it cannot be of much advantage to the body of students, as a whole, as an athletic exercise. As a national, or universal game, for the improvement of physical health in general, it must therefore be labelled "a failure."

Secondly—the game from an intellectual point of view. It is claimed, and this will not be contradicted, that the members of the "elected eleven" are usually at the front in all their classes in our schools. This is not much of an argument in favor of the game as a stimulant in intellectual studies when it is found that in the selection of members a symmetrically developed muscular system, of more than ordinary power, usually is found in men of more than average brain force, who can maintain their standing with ordinary and less gifted persons without extraordinary application. Our best athletes are our best scholars because they have more than the ordinary ability for the start and more endurance in the intellectual race. As an argument that the game of football develops the intellectual faculties as a whole, it is not reasonable or sound. In some respects it does quicken the mental processes, and stimulates the powers of observation. Watching the opponents for openings for attacks, and responding promptly to assaults, are among the chief advantages to be gained in an intellectual view—these are substantial merits that can be freely admitted,—but would not materially assist the student in the pursuit of scientific knowledge or in most of the common duties of life.

Thirdly—Some one has stated that the game is a promoter of good morals. This may be true if limited to the "elected elevens"; but if all the enthusiastic followers of the game are included many facts and circumstances would rather present a contrary aspect. The victorious crowd after a game are not found at the churches or prayer meetings, but more frequently in the streets with boisterous manners, and at the saloons and other places of amusement.

Fourthly—Then there is the feature of betting on the result, which cannot be eliminated and cannot fail to have an evil effect on the excited and imitative youths. Thus the argument of morality, except to a limited number, cannot be sustained by competent evidence.

Fifthly—The medical point of view. This appears the most serious of all considerations, and should be carefully and candidly stated. Some of the most objectionable and dangerous features may have been recently eliminated as far as those in authority have been able to dictate; but the long list of killed, maimed for life and numerous other injuries of more or less severity testify to the great danger yet remaining from accidents and other causes to those who mingle in the fray. When a professional prize fighter like Corbett says he would rather take his chances of injury in a regular prize fight than in a mix-up in a football game, we can understand great danger of physical disability to the players still remains as a not unlooked for result. A bruised shin, or a black eye, or a fractured clavicle, arm or leg, are minor injuries compared with brain shocks and hernias and the foundation of heart disease.

Digitalis and Aconite in Cardiac Disease.

Dr. Hobart A. Hare read a paper on the above subject at the last meeting of the American Medical Association, and explained how the valuable powers of digitalis could be secured and at the same time some of its disadvantages avoided. The Doctor thinks too large doses are often given, and continued longer than necessary. Large doses may be required at first, but they should be rapidly decreased, as he has found small amounts, as one or two minims of an active physiologically tested tincture, given three or four times a day, produce excellent results; the patient resting to give the heart therapeutic aid. "Digitalis," he says, "may do more harm than good if the coronary arteries are so nearly closed that it is with great difficulty the heart can force blood through them in increased quantity, and again if the myocardium is in a state of advanced degeneration."

Dr. Hare is also of the opinion that in some cases of valvular disease the patient does not need digitalis, or any other cardiac stimulant for his relief of cardiac symptoms; but suggests rest and the administration of aconite, "which has a steadying effect on the heart through its influence on the vagi as has digitalis." By its sedative action on the heart muscle in hypertrophy, which sometimes produces an excessive irregularity, and by its relaxing effect on the blood vessels good results follow. In closing the discussion on the paper, Dr. Hare said: "That if you gave digitalis without nitroglycerine to guard against the increased rise of pressure, you stimulate the heart without removing its burden; if you combine the nitroglycerine with the digitalis you both stimulate the heart and also relieve it of some of its burden."

Rest and careful moderation of muscular exercise are powerful remedies in the matter of restoration of any weakness of the heart, as well as in the prevention of sudden collapse in hearts diseased beyond expectation of recovery. The line must be drawn by such patients, excluding football games, running matches, and to overtake a train of cars on the point of starting, wrestling, and all athletic feats of strength that demand violent or prolonged exercise. An even disposition in meeting the daily business, and the trials of life, and a prudent husbanding of strength has saved the lives of many men of weak and diseased hearts to an age even beyond the scripture limit.

B.

Oxygen and Sodium Chloride as Life Elixir.

From the physiological laboratory of the University of Chicago comes the report that a new scientific fact has become established.

Professor David J. Lingle announces through the last issue of the American Journal of Physiology that not only does sodium chloride act as a stimulant to the heart's action but that there is a more important element in this connection, which is oxygen, the maintainer of the heart's action.

Professor Lingle, who is an assistant of Prof. Loeb, came upon his discovery partly by accident. When experimenting with a strip of turtle's heart which he was removing from a solution of sodium chloride, he noticed that its beats greatly increased when brought in contact with the air. Further experimentation showed that in placing a piece of the heart, which had ceased to beat on account of mechanical violence imparted in the preparation, into a solution of sodium chloride that the strip of heart began to beat. Upon placing the now beating strip in a jar of oxygen this condition was maintained for seventy-two hours. Never before has any one been able to accomplish this for such a length of time.

• Professor Lingle sums up his investigations as follows:

"1. Sodium chloride is absolutely necessary for the origination of rhythmic activity of heart strips.

"2. Agencies like caffein that can intensify rhythmic activity cannot originate it.

"3. What has been described as the sodium chloride arrest is probably due to a lack of oxygen in the salt solutions. The presence of oxygen in these postpones its development and starts the rhythm again.

"4. Ordinary salt solutions do not contain enough oxygen for normal activity of heart strips.

"5. Oxygen gas and sodium chloride, if properly used, will keep strips beating as long as a mixture of salt solution.

"6. Oxygen gas has a powerful influence on rhythmn, but is of itself powerless to originate rhythm.

"7. Oxalate solution that precipitates calcium will permit beats to begin if sodium chloride is present."

More Announcements Expected.

It is expected that many new and important steps and discoveries in the field of physiology will be announced at the meeting of the American Physiological Society during the holiday season in Washington. Professor Mathews and Dr. Fisher are busily engaged at the University of Chicago.

It was just one year ago that Professor Loeb startled the scientific world by his statement and demonstrated that the vital force of life comes from the electricity in the food which is eaten and not from heat elements contained in the food. •

The Roentgen Ray in Obstetrics.

Joseph Brown Cooke, Surgeon to the New York Maternity Hospital and Fellow of the New York Obstetric Society, gives this subject lengthy consideration in the Medical and Surgical Monitor.

The writer discusses the subject from the standpoint of the obstetrician and general practitioner, rather than that of the X-ray expert. The author does not believe that this method of examination will ever supplant the older diagnostic resources, i. e., palpation and pelvimetry. These latter methods when practised by the skilled obstetrician are highly satisfactory. If they are to be displaced or supplanted it must come from the discovery of some method which presents distinct advantages over the old in accuracy or simplicity.

While it is true that an X-ray expert can outline with some precision the bones of the pelvic cavity and determine the existence of abnormalities in the non-pregnant, nevertheless to the inexperienced this is difficult. Almost insurmountable difficulties arise upon the intervention of a fetus with its envelopes and accompanying thick uterine wall.

Added to these obstacles may be mentioned the foetal movements and those of the mother, which combine to make the picture unreliable as a source of diagnostic data.

The experiments of Varnier and Pinaud in the photographing of the gravid uterus, both in the living and dead subject, are reviewed by Williams in his book, "The Roentgen Ray in Medicine and Surgery," as follows:

"In one patient who died of pulmonary congestion, the photograph showed the outline of the uterus and within it the vertebral column of the fetus. In another who died of eclampsia when the fetus was seven months old the right border of the uterus was pressed to the left and the head of the fetus was presented at the superior strait. They also made X-ray photographs of the gravid uterus in sixteen women, of whom seven had been pregnant from 2 to 4½ months and nine from 5 to 7½ months. The conclusions drawn from these cases were as follows: The maternal pelvis can be completely seen up to 4½ months and more clearly the earlier the photograph is taken; but of the uterus and its contents no trace is perceived. These latter are traversed with such ease by the rays that they do not interfere with the study of the pelvis. After five months the uterus and its contents form on the negative a veil, as it were, which is badly defined and without definite contour, but which conceals the posterior wall of the pelvis and the vertebral column. In two cases a pale silhouette of the fetal head could be dimly defined in the pelvic area.

"In a second series of seven cases the same results, (that is to say, negative), were obtained whether the fetus was alive or dead. Two of these patients had been pregnant from two to three months and five from five to eight months.

"In the living patient the head of the fetus can be photographed at the opening of the pelvis as well at 6½ months as at the approach of full term, and the size of the foetus, its orientation and the amount of flexion and engagement can be estimated. In such photographs taken in the reclining position neither the spinal column nor limbs of the fetus are seen."

Dr. Cooke does not think that these results are any better than those obtained by the ordinary methods of examination. He does not think that the claims made by these investigators that the presentation, position and degree of engagement can be estimated by the rays, are well founded. Another feature which is of importance is the discomfort and danger of long exposures, which are necessary in order to secure a legible negative.

Bouchacourt (researches published in 1900) finds the rays of service in the determination of exostoses, contractions and other deformities, but believes them unreliable in the examination of the fetus in utero.

Mullerheim's conclusions coincide with those of Bouchacourt regarding the determination of pelvic deformities, but is extreme in the belief that not only can the presentation be determined but also the dimensions of the fetal head and pelvis.

The author maintains that inasmuch as the determination of the presenting part of the fetus and its relation in size to the pelvic strait is one of the rudiments of palpation and mensuration, Mullerheim's investigations do not prove that the employment of the X-rays is a material help in obstetrics.

Davis of Philadelphia has done considerable X-ray work along this line, but he is not impressed with their value in diagnosis.

The osseous portions of the skeleton of the fetus can only be seen when the uterus is removed from the body or the fetus is directly examined. According to the experiments of Varnier and Pinaud, neither the fetus nor the uterus can be determined in the pregnant woman till five and a half months have passed. At this time the fetal heart can be heard, fetal movements can be distinguished and ballotement secured showing that as a practical aid to an early diagnosis the X-ray is of little assistance.

In cases of polyhydramnios where palpation is difficult the Roentgen ray might be of service in determining the presentation, but when it is remembered that in these cases presentation changes from time to time, thus decreasing the value of one examination. In women with fat abdominal walls, some good is derived from an X-ray examination, but even in these cases careful palpation usually yields satisfactory results.

In ectopic pregnancy there seems to be no advantage gained by their use. It would be very difficult to determine whether the fetus was outside or inside the uterine wall.

In twin pregnancy the author feels that there is a field for this method of examination, as it might be possible to determine the presence of two vertebral columns or two fetal heads, thus making the diagnosis settled.

In feigned pregnancy the rays would be of value in showing the absence of a fetus, providing the examination were made at a time when if there were a fetus it could be determined by this means. But palpation or palpation in conjunction with anaesthesia would be more simple and wholly reliable.

Walsham's experiments, which went to show that in the case of still birth the lungs were opaque to the ray, may delegate to this method medico-legal importance, but the older practice of floating the lungs in water is more simple and equally trustworthy.

* * *

Original Articles.

Preventive Medicine,

By Edward H. McIntyre, M. D., Minneapolis.

This branch of medical science has received such an impetus since the real nature of many diseases has become known that many regard it as of recent origin. History shows, however, that in a very early time public health was made a subject of legislation, and that very early the principles of hygiene were practiced by the Egyptians and Hebrews. The Greeks and the Romans paid particular attention to physical culture, and general sanitary measures were introduced into Athens at a very early period of her history. It was not, however, till the beginning of the last century that the idea that disease is more or less preventible gained firm hold upon the minds of the scientists and the more intelligent people. Then as the nature of the various diseases became studied, there grew along with the progress of the school for cure, weak efforts at prevention. The results of the former school were so much more brilliant that the workers in other fields were fewer and less enthusiastic. At the present time, when the origin of disease is better understood, there is a tendency to harmony and unity in their progress.

When investigators began to learn and study the antecedents of the phenomena of disease, and the reasons why disease existed at all, then there sprang into light those elements which were essential to the formation of a new and powerful principle, that of the prevention of disease. The grand work of this era has been to reconcile the two schools; to systematize the preventive part of medicine: to bring the preventive entirely in accord with the remedial; to let the world know the inter-relationship which exists between the two parts and by the sympathy of action, based upon knowledge, to enable every man and woman to assist in that part which tends towards prevention. It has been a long and difficult task to trace the diseases from their incipiency, to seek out the conditions from which they originate, and finally to point out means by which these affections can be avoided or combatted. The working out of these problems in Preventive Medicine has required of its servants analytical power of the most painstaking type in conjunction with a practical design as to the availability of the knowledge.

It is in the field of infectious diseases that the principles of preventive medicine have won their victories. The eradication of these so-called preventive diseases is the highest aim of scientific medicine to-day. The public must be educated regarding the nature of these diseases, in order that it may co-operate with the sanitarians in effecting a decrease of the prevalence of these suppressible diseases.

It is a lamentable fact that the practical application of the truths of scientific medicine is deeply inferior to what it should be. When it is known that tuberculosis, typhoid fever, smallpox and dysentery are all preventive, and are permitted to devastate humanity, a serious reflection is cast upon the general intelligence of the people. Higher medical education and a suppression of quackery must precede a successful dissemination of facts among the laity regarding infectious diseases.

Sanitary Conditions.

Since the European invasion of cholera in 1830, the English towns which had been visited by this disease and those fearing similar scourges, in view of their sad experiences, were willing to institute sanitary reforms. Sewers, public water supplies, and a general sanitary condition of the home became the order of the day, and with it the birth of modern hygiene and sanitation. The example set forth by England was followed by all civilized peoples. Efforts at sanitation were demonstrated in the Crimean war, the civil war, and lastly in the Spanish-American and South African wars.

The United States were not slow in adopting sanitary measures and instituting laws governing public health. The invasion of cholera in 1832 and the epidemic of 1848-9, here as in Europe, aroused public interest in sanitary reform. Finally health boards sprang into existence, which adopted measures to deal with infectious diseases; and for the sanitary inspection of the food supply, schools, public institutions and tenements. Registration of vital statistics, supervision of burials, water supply, sewerage disposition, etc., followed.

Voluntary organizations such as the American Public Health Association, Section on State Medicine of the American Medical Association, the Climatological Association, and the American Sanitary Council, and numerous other organizations made impressions upon the public mind which have resulted in numerous sanitary reforms. Following the cholera epidemic in 1872-3, and the yellow fever epidemic in 1878, national and international quarantine systems sprang up which involved the inspection of vessels and their passengers, isolation of the sick, and the treatment and detention of suspected cases. These systems have been adequate to a certain degree in enabling us to keep these diseases from our shores.

Water Supply.

No preventive measure in the field of medicine, not underestimating the brilliant achievements of Jenner and Lister, have been wrought with such magnificent results as have the efforts which have been put forth in the last half century to improve the water supply of the world. There is plenty of evidence showing that the introduction of sewers and public water systems in a number of cities has been accompanied by a decrease of almost fifty per cent in mortality. The good effects are plainly shown in the great decrease of typhoid fever, cholera, dysentery and tuberculosis. The vital statistics of Great Britain are sufficient proof of the great good derived from an adequate and pure water supply. The mortality rate at Salisbury has been reduced from 40 to 16 per thousand; at Dover from 28 to 14 per thousand; at Rugby from 24 to 10 per thousand; at Croydon, 28 to 15 per thousand; at Matlock, 18 to 9 per thousand. It is a common expression that every sewered city shows a lessened typhoid mortality subsequent to the introduction of sewers, and that the typhoid fatality is always higher in places supplied with privy pits and box privies than in localities where houses have sewer connections. The only explanation is, of course, that sewers carry away the infectious material which would otherwise contaminate the soil.

The number of towns in 1800 in the United States having a public water supply was only sixteen, supplying about 2.8 per cent of the existing population; in 1850 there were eighty-three public water works, supplying about ten per cent of the population; in 1897 there were 3,196, supplying about forty-one per cent of the census population. There is conclusive evidence, here and abroad, pointing to the fact that there has been a great decrease in deaths from enteric and other diseases when a pure water supply was substituted for a contaminated one. For example, the typhoid fever death rate for Boston from 1846 to 1849 was still 17.4 per ten thousand; in 1890-2 it had fallen to 3.2 per ten thousand, the city in the meantime having expended $25,000,000 on its water supply. The typhoid fever death rate in Chicago in 1890-2 averaged 12.5 per ten thousand. After improving the water supply it fell at every step of its improvement, till last year it was only 1.9 per ten thousand, a total reduction of 84.8 per cent during the decade. London, Berlin, Vienna and Munich present similar statistics.

In 1893, 41 per cent of our population lived in towns having public water supply, and only 28.7 per cent in sewered towns. It is evident from this data that the municipal authorities failed to recognize the fact that public water supply and a sewer system must go hand in hand. The neglect of the latter means sure pollution of soil and rivers, in the train of which follows certain disaster.

The Marine Hospital reports show that cholera, typhoid fever and dysentery are more prevalent in those towns situated along the great rivers of this country, it being at once apparent that such a condition is due to the pollution of the streams, one city being a source of another's contamination. It is estimated that no fewer than 35,000 deaths occurred last year from typhoid fever alone. The average duration of this disease is thirty days. If we calculate that on an average $1.00 per day is expended for care, treatment and loss of work, and that the value of a human life is $5,000, we have a total loss in the United States of $105,000,000 per annum from one of the so-called preventible diseases.

Congress appropriated $40,000 to exterminate the gypsy moth, but Mr. Barthold's bill for the appointment of a commission to look after river pollution was defeated. Such is the attitude of legislation towards this subject. The pollution of a stream by an individual or community when said stream is a source of water supply for the same or another community, is an outrage and should be legally considered as such

Irrigation provides a means for sewage disposal, but when for any reason this can not be instituted, chemical means should be used to render sewage inert. At the present time over one hundred communities have established means to rid themselves of sewage, there being eighty irrigation plants, and about twenty localities employing chemical means.

While the public water supply has been a great boon in the reduction of mortality, still, in many cases, the source of this supply is decidedly unsafe. The waters are often rendered impure and dangerous to life by drainage from cultivated fields where the rains wash the fertilizers into the streams, and often, too, pollution from shops and factories complicate the situation. The advice furnished by the city to boil the water effects in reality no purification of it, as it is too often so carelessly done that the dangerous germs remain undisturbed. The domestic filter is an article only too often a dangerous device, well adapted to the breeding and dissemination of disease. The soluble poisons pass through and bacteria collect in the filter, multiply and are the source of continuous infection. The efficacy of hard and mineral waters is often exaggerated, while indeed they even contribute as a cause for premature old age and decay. The inorganic minerals in the water are absorbed and deposited in the tissues, causing sclerosis and loss of elasticity. The purest spring waters and the most popular ones are those which come nearest, in analysis, to distilled water. The only absolutely pure water for drinking and culinary purposes is the latter; it is the greatest solvent and rids the body of excreta more thoroughly and tends to longevity.

Food and Food Legislation.

From the cradle to the grave the question "What to eat" faces humanity. It is the striking fact that one-tenth of all infants do not live a month, and that one-third do not reach the age of three months. This is due, in a large part, to digestive disorders growing out of improper food. It is a scientific truth that breast feeding is superior to artificial feeding, but the former must be suspended in many cases and resort had to the latter. Cow's milk, plain or modified, has been the most popular substitute, but it is often unsatisfactory and indeed positively dangerous. The consideration of the methods by which cow's milk becomes unfit for use and contaminated, involve: (1) Diseases affecting the cow, her food and surroundings; (2) contamination of the milk while it is prepared for shipment at the dairy, and while being transported and delivered to the consumer; (3) after the milk is in the hands of the consumer. To avoid such contamination it is necessary to secure intelligent supervision over the entire milk industry, with due attention to its source and the methods in vogue in its delivery. In view of the immensity of this traffic, its supervision becomes an important obligation. It is said that 1,250,000 quarts of milk are consumed in New York city daily. That would mean milk from 155,000 cows, and the employment of 35,000 milkmen., It can be readily appreciated from these figures that the liability of milk infection is very great. In regard to diseases affecting the cow, tuberculosis is the most important. In this connection, comes up the question of the communicability of bovine tuberculosis to human beings, which will have to be left at the present time unanswered. Digestive troubles often affect the cattle during periods of drouth when they are forced to feed upon weeds and plants owing to the scarcity of grass. It is very well known that such conditions in the health of cattle affect the dairy products. Not only should the food of cows be of the best, but the condition of the stables, which are often disastrously unhygienic, should be carefully inspected. Contamination by the hands of milkmen need only be mentioned. Scarlet fever, diphtheria and typhoid fever occur by means of milk so contaminated, or result from the addition of impure water. The various preservatives, borax, salicylates and paraldyhide, are pernicious.

The multiplication of bacteria in milk is stupendously rapid. In very good milk fresh from the cow there are usually 3,000 or 4,000 bacteria per cubic centimeter, while milk such as is generally used in cities contains as many million bacteria per cubic centimeter.

Physicians and sanitarians have long recognized the necessity for the introduction of systematic inspection of milk and other dairy products. Unfortunately, this necessity has been met in too few localities. The Philadelphia Pediatric Society has appointed a committee, consisting of a bacteriologist, veterinarian and physician, whose duty it is to note all the conditions which affect the milk traffic of that city. Certificates are issued to the different dairies when their products are up to the standard fixed by the society. In New York a somewhat similar restriction is placed upon the milk traffic. These methods cannot be commended too highly for universal adoption.

The remarkable strides made in the preparation of palatable and digestible foods, placing the art of cooking on a scientific basis, has been one of the characteristics of nineteenth century progress. There is still a great need for the advance of this work, especially among the poor classes. The establishment of cooking schools and the relation existing between pure food and health are signs that indicate better things. The chemistry of food is an important branch of science and should be understood by the housewife.

Already a great degree of perfection has been attained in the manufacture of foods similar to mother's milk in their constituency, which may properly be used when, for any reason, suspension of breast feeding is desired.

The first movement toward securing legislation against the adulteration of foods was made in 1879. National legislation is necessary in order to effect the greatest good. Almost every article of food has been subjected to adulteration by unscrupulous merchants. The addition of water to milk has been one of the most universal instances of this practice. It has, without doubt, been the cause of thousands of deaths from typhoid fever and other water-born diseases. The results achieved by health officers in Chicago, Buffalo and Washington, in the reduction of infantile mortality one-half is convincing proof of the efficacy of food legislation.

The question of food is indissolubly linked with that of exercise; especially is this true in the later years of life. In childhood the system readily accustoms itself to the demands made upon it, but later on there is not such adaptability. Neglect of exercise brings on certain results. At the same time another unfortunate thing happens in that this same person who neglects to take the proper amount of exercise eats too heartily. This practice is more prevalent in the cities, and more common among the well-to-do than among the poorer classes. The former contract sedentary habits, confining themselves to their offices during the day, taking a very small amount of exercise and living upon the richest kind of food. The result of such habits soon becomes evident. A mild sort of intoxication is set up and metabolism is disturbed. Excretory organs fail to perform their functions. The kidneys, liver and circulatory organs become impaired and inactive, and there results a storing up in the system of poisons which effect a slow disintegration of the tissues.

School Hygiene and Sanitation.

Statistics show that there are over fifteen million children enrolled in the common schools of the United States.

Important as its existence is, nevertheless it was not until forty years ago that modern school hygiene and sanitation had its birth. Since then there has been considerable attention paid to the environments which are a part of school life. School buildings are built with regard to sanitary laws. Cleanliness is more rigidly observed. Sewage drainage is more thorough. Drinking water facilities are much improved, and altogether the general conditions are more favorable to hygienic living.

Not wishing to under estimate the great importance which should be attached to those conditions which underlie and to which are due many nervous and chronic affections, it is, nevertheless, to infectious diseases that we owe our most concern.

When it is considered that children up to the age of six or seven years are allowed to run and play and are subject to no restraints, and at this time without a period of transition they are plunged into a life with new environments, being obliged to remain in a sometimes unsanitary school room, it is not to be wondered at that there exist these so-called school diseases.

Statistics show that there is a decided increase in infectious diseases during the school year. This is due, unquestionably, to the mingling together of children from many localities, thus establishing many routes and possibilities for infection. In the school room there is a continual interchange of slates, pencils and books. In kindergartens their caresses bring them in close contact with each other. In both instances these habits invite infection. Children are more susceptible to infectious diseases than adults, and these habits are sufficient to prepare a means of communication.

For fourteen months, ending in January, 1896, 16,790 children were examined in the schools of Boston. Of this number, 6,053 were found to be not well; 10,000 ill, and 2,041 sick enough to be sent home. Of the number examined, 453 had contagious diseases; that number were sitting alongside of well ones, thus exposing them. When a number of sick children are allowed to remain in school it is obvious that the number of exposures will be very great. In 1899, in this same city, there were 468 specific infectious disease cases; oral and respiratory, 2,738; ear, 144; eye, 434; skin, 3,252, and miscellaneous 10,413, making a total of 17,499. Most of these were in a condition to communicate the disease.

From a consideration of this subject and the facts which are involved, it becomes plain that there is a need of an organized corps of inspectors to afford an adequate school supervision. The duty of the school inspectors should be to visit schools, examine pupils and give such directions as will reduce the danger of spreading contagious diseases to a minimum. They should also make regular inspections of the school buildings and recommend any measures which they might deem advisable for the well-being of the pupils and teachers. Such measures are in vogue in many of the large cities, and are proved to be very effective.

Tuberculosis: a Preventable Disease.

When Robert Koch pointed out that the tubercle bacillus was the etiological factor in tuberculosis, it no longer could be regarded as a stigmata of social depression and as an inevitable evil, but immediately became known as a preventable disease.

The recent discussion regarding the communicability of bovine tuberculosis by means of infected meats and milk was not productive of definite results. While it is generally conceded that cattle and their products should still continue to receive inspection at the hands of authorities, it is nevertheless agreed that human infection from this source is comparatively small. The question involves most decidedly infection from man to man, and consequently has a wide social aspect as well as a medical one. The crowding together of the poor in cities: the unhygienic surroundings; the use of unwholesome food and deficient clothing, are factors upon which the latency and spread of tuberculosis depend.

Persistent and powerful efforts are needed to correct this state of affairs. Legal action, in connection with the education of the masses, regarding the nature of this disease, will do much to limit its ravages. Whatever is done to accomplish the best results must be secured bv means of systematic and rigid efforts at the hands of enthusiastic and capable workers.

The desirability of sanitary life, especially as it exists in a number of the larger sanitariums, is questionable. Here, often, tuberculous patients are found huddled together in rooms in which the walls, curtains and furniture have not been disinfected since the removal of the last patients. Then, too, there is a disastrous intermingling of towels, linen and clothing. A social communication exists between the sick and the well. The natives in these parts where tuberculous patients are brought together suffer infection through the same means. Influenza often becomes rampant and furnishes a means of communication of infection through the instrumentality of towels and other effects of the sick. In the general hospitals a somewhat similar condition prevails, wherein the rooms occupied by persons suffering from the disease are insufficiently disinfected, and the fact that they have been occupied by patients suffering from tuberculosis is guarded as a professional secret. A complaint which is generally laid at the door of these institutions is that they habitually underfeed tubercular patients; also that they refuse to admit patients in the last stages of the disease, and persist in sending them to their homes when they become hopeless, with the statement that their death in the hospital seriously affects the welfare of other patients, while in truth these things are practiced to keep down the mortality records. Of course, if these institutions were in the hands of the state, these objections might be eliminated.

Efforts directed toward the prevention of tuberculosis should aim to correct the various predispositions, those depending upon heredity as well as those which originate post natal. The part legislation can finally play in the demand of a physical and mental standard to be obtained by those contracting matrimony is an unsettled question. In this regard the United States is advanced beyond the other nations. Already the state of Michigan requires that all lunatics, epileptics and criminals three times convicted shall be castrated before leaving the hospital. And in other states (Indiana, etc.), tuberculous individuals are forbidden to marry. What class shall we include when we decide to take legal steps in the way of the prevention of this disease? If at every numbness of the apices, with stertorous or bronchial breathing, or expectoration of tubercle bacilli, a teacher or clerk is deemed a dangerous associate and isolation enforced, then there would be crowded sanitariums and families deprived of bread-winners.

It must be readily conceded that the vital factor in this question of tubercular infection concerns not so much the fact of the presence of the Koch cells as it does the readiness with which they find a nidus favorable to their growth and multiplication. Hence it becomes apparent why we should attempt to strengthen the individual resistance by means of an untainted heredity and strict post natal hygienic influences, the former calling for more rigid rules governing matrimony, and the latter attention to food, clothing, sanitation and exercise.

In order to obviate the difficulty presented in the over-crowded dwellings, it will be necessary both for the well-being of the patient and the public at large to remove the tubercular patient to a suitable hospital. Whether this is to be done by compulsion or by whatsoever means remains a question. As the general hospitals at present feel a reluctance in accepting 'a tubercular patient well advanced in the disease, it is very probable that state and municipal authorities only can provide means for the establishment of suitable retreats. But until this is brought about very much can be done by the establishment of special wards in the existing hospitals, where the tubercular patients could be housed with a minimum amount of danger to the other inmates and with a great good to themselves. Pecuniary facilities might be introduced, and in this way the patients might be induced to remain for a longer period in such institutions. The great effect of such a project would be the obvious diminution of infection and consequently a reduction in the sum total of tuberculosis could not fail to be secured. The execution of these plans provides a wide field for the action of philanthropists, state and municipal authorities, and, is a certain way to successfully combat a disease that is responsible for one-fifth the mortality in the human family.

At present there is no single measure alone adapted to combat tuberculosis. It is the union of the several hereafter referred to that can produce a successful issue. Among the measures necessary for a well understanding of the nature and progress of the disease, obligatory notification is especially valuable. It is the only sure means of keeping in touch with the state of dissemination and the increase or decrease of the disease. It will point out a way for help, a place for instruction and material for disinfection. It would, of course, be unnecessary to notify all cases of tuberculosis, but only those which owing to domestic conditions, are elements of danger to the people about them. Norway has such an instance of limited notification, instituted by special law. In Saxony, the condition prevails by order of a religious decree. In New York, and in several American towns which have followed its example, a similar practice is in vogue.

Stress can not too often be laid upon the importance of thorough disinfection in connection with tubercular cases. Besides strict, thorough disinfection of sputum and the bodily excreta, the dwellings, beds and clothing should come in for their full quota of attention.

(Continued Next Issue.)

Hoped He Might Improve.

Husband (vituperatively)—I was an idiot when I married you, Mary.

Wife (quietly)—Yes, Tim. I knew you were. But what could I do? You seemed my only chance, and I thought then that you might improve a little with time.—Washington Times.

Medical Miscellany

Hamline University Clinic.

St. Mary's Hospital, Nov. 28.—A case of gonorrhea arthritis, patient 25 years old. The left knee was swollen; inflammation lasting five months, with the result of anchylosis. The knee was bent at an angle of 160 degrees. The patient was anasthetized and the adhesion partially broken up by forcible flexion followed by extension. A posterior splint was applied to further extension of knee after treatment consisted of ice bags for twenty-four hours, followed by passive motion.

Another similar operation was performed later. The patient is now about with a moveable knee joint.

L. LIMA.

St. Mary's Hospital, Nov. 28th.

SYMPOSIUM ON TYPHOID FEVER.

Hemorrhage.

Dr. R. G. Curtin read a paper entitled "Hemorrhage in Typhoid Fever." The etiology is hard to explain. He thinks that the more profound the toxemia and the greater the blood changes the deeper will be the sloughing. He had never seen hemorrhage in a patient under 6 years; it is rare in children and when it occurs is rarely fatal.

It should be remembered that a patient may die without external signs of hemorrhage. The amount of blood loss may be estimated by the fall of temperature and depression. Those with most severe symptoms sometimes recover. The associated conditions most serious are renal disease, organic heart disease, hemophilia, tympanitice condition of the abdomen, obstinate diarrhea and vomiting. Treatment is believed to be usually more or less valuable. Following are some of the remedies advised: Ergot, turpentine externally and internally; oil of erigeron when the stomach will bear; mineral and vegetable astringents; ice externally and in the bowel, employed continuously; suprarenal extract the author has used with good effect; elevation of the foot of the bed; ligatures about the limbs. The speaker, in 1893, reported 17 cases with a mortality of 5. More recently he reported a series of 43 cases with a mortality of 23. The recent increase in mortality is ascribed to the cold water treatment. It is believed that the number of cases has also been increased. The effect of the sudden chilling is believed to congest the internal organs and thus increase the liability to hemorrhage. The speaker cited several cases in which he believed the cold bath or sponge to have been the immediate cause of hemorrhage.

Pain in Typhoid.

Dr. H. B. Allyn presented a paper: "Significance of Pain in Typhoid Fever." Pain was classified as extra-abdominal, due to hyperesthesia and hysteria, and as abdominal, due to intestinal colic, entero-colitis, chloecystitis and peritonitis either with or without perforation. The speaker dwelt on cholecystitis as a common complication, and believes that recrudescences often ascribed to indigestible food are really not infrequently due to this complication. Clinical cases were cited. Pain indicating perforation of the bowel is most serious. Tenderness and muscular rigidity are usual symptoms of this condition, but pain, often in the right lower quadrant of the abdomen, is the only constant symptom. Confidence was expressed in the value of the frequent skilful blood-counts regarding leucocytosis, especially as helping to diagnose complications. Pain and tenderness are not necessary accompaniments of typhoid fever, but should be regarded as danger signals.

Operation in Typhoid Perforation.

Dr. R. G. Le Conte advocated prompt operation following diagnosis of perforation. The peritonitis of typhoid perforation is much more rapid and widespread than that of appendicular perforation. Fatal result from operation may usually be attributed to one of two causes, namely, delay in operating, or surgical errors of judgment or technic. To prevent delay in operation, three things are essential; first, Osler's advice must be followed and all our past cases of perforation carefully studied, that light may be thrown on the early diagnosis of this condition; second, in a hospital, consent for operation should habitually be obtained for all cases of typhoid fever; and third, the surgeon should be called at once in probable cases. It is too late when the diagnosis is made certain by signs of peritonitis.

Surgical errors of judgment and technic are discussed under four headings: 1. Shock; immediate operation is advised even in profound shock. 2. Incision is recommended in the right semilunar line as 85 to 90 per cent of perforations will thus be exposed. 3. Treatment of the lesion. Where simple closure is possible, interrupted Lembert mattress sutures are advised. When closure is not practicable walling off the infected area by gauze is advocated. Resection of the bowel or formation of an artificial anus are methods for exceptional cases. Sometimes a single large opening may be plugged with a piece of omentum. 4. Peritoneal toilet and drainage. When peritoneal infection is limited to the right lower quadrant of the abdomen, it is recommended that the infected coils of intestine be brought outside of the abdomen and cleansed with salt solution and gauze sponges, while the cavity within is sponged dry without flushing, and then free drainage assured with gauze strips and a tube leading to the pelvis. If, however, the peritonitis is extensive or universal, a supplemental median incision should be made, permitting considerable evisceration and copious douching, followed by free drainage. The patient's head should be maintained elevated, so that the fluid may gravitate to the pelvis, the least absorbable part of the peritoneum and most readily drained. The fact was cited that the average typhoid patient stands a short operation well, but that prolonged operation is attended with grave risks. Therefore, the simplest and shortest surgical procedure that is consistent with recovery should always be employed.

Feeding in Typhoid.

Dr. Wm. Egbert Robertson believes that the dietetic management of typhoid fever has been given too little attention. Very few statistical reports dealing with large numbers of cases have been made. The laboratory work of Pawlow and his pupils in St. Petersburg is of importance. They showed that both a physical and a chemical secretion of the digestive glands takes place and that the former actually stimulates the latter. So, by tempting the appetite, a variety of food can be given in an effort to stimulate the desire for food; for food taken willingly, or especially with pleasure, is more apt to be digested and assimilated than when a food repugnant to the patient is forced on him. A fairly large postmortem experience on the part of the speaker has shown him that, no matter what the diet, except milk, the small bowel always contains liquid feces only, and that formed material is found only in the colon. When milk alone is allowed, or when it constitutes the bulk of the food, it is often found in putty-like masses all along the alimentary canal. Even when milk is well taken and assimilated, the washing and exhaustion are pronounced, while in those well fed, this condition is usually absent. In fact, in well-fed cases, the condition which gave the disease its name is almost totally wanting, and convalescence is short. Of course, we can not expect to shorten the febrile period, but the time of total disability can be materially shortened. We have no remedy for the disease, and all our efforts must be directed toward the dietetic and hygienic management.

While he would not advocate a full diet, the following can be administered, not only without fear of harm, but with beneficial results: Eggs, raw or cooked, cereals, bread and butter, salad, well-cooked spinach, potatoes, macaroni, soups, gelatin, jellies, custards, all beverages such as tea, coffee, chocolate, etc., ice cream, and chicken. On such a diet the patient is able to combat the wasting, the liability to complications is lessened, and convalescence is shortened. Of course, in gravely toxic cases and to the comatose, only liquid food, if any, can be given.

Discussion on Typhoid Fever.

Dr. G. G. Davis referred to the possible independent onset of appendicitis in typhoid. A plea was made for the support of the surgeon by the physician in doing early operations in perforation.

Dr. Hobart A. Hare, said he could not conceive how any ordinary styptic remedies can reach the seat of hemorrhage. He is convinced that Nature is always the chief factor in the arrest of such hemorrhage. Monsel's salt enclosed in several layers of capsules, he believes the only possible efficient remedy of this class. Exceptions were taken to those who believe in assuming chances in operating when perforation can not be positively diagnosed. Cases were mentioned in which operation being refused, recovery showed either a walling off of infection, or that no perforation had occurred. Operation in such cases may have proved fatal. The speaker has seen patients early in typhoid with all the symptoms of appendicitis.

As to feeding, the speaker expressed himself in favor of a more liberal diet than is often used. He believes in excluding meats and meat broths because they are good culture media, but favors giving soft eggs and strained thin starches, with some starch digestive ferment.

Dr. Mordecai Price expressed belief in the easy differential diagnosis of appendicitis and typhoid fever. Gangrenous appendicitis is the only variety simulating typhoid fever and it is rapid in onset. He believes in the median incision in operating for perforation, and believes in washing the peritoneal cavity with plain water, not with salt solution.

Dr. John H. Gibbon urged early operation because general peritonitis means fatality. Of 11 cases operated on at the Pennsylvania Hospital, four had recovered.

Dr. B. F. Stahl favors granting the demand which typhoid patients make for a variety of food, giving especially meat foods or starches. He likes sterile meat broths, especially one made at 167 F. or less, to which hydrochloric acid is added. He advises the use of several of the limitless variety of ways of preparing milk.

Dr. William L. Rodman considers hemorrhage as a surgical condition. Following surgical principles, he believes in the intestinal injection of water at 110 to 115 F. This may control hemorrhage; it at least combats shock. Rarely, he believes, is there a spontaneous cure following perforation, whereas by operation perhaps 25 per cent can be saved. A certain parallelism was pointed out between the condition of typhoid perforation and gunshot wound of the intestines—the two conditions demanding similar treatment. The speaker coincides mostly with the views of Dr. Le Conte, except that he believes in flushing the infected peritoneum rather than wiping it out.

Drs. Curtin, Allyn, Robertson and Le Conte closed with very brief remarks, the latter explaining that, if, in operating for perforation, he finds general peritonitis, he flushes the cavity freely; if only a few coils of intestine are infected, having drawn such coils outside the abdomen, he flushes them, afterward returning them, and always providing for free drainage.—Therapeutic Journal.

4. A fourth danger lies in the effect of the bronchitis on the heart. Chronic myocarditis develops so insidiously that one may not always be able to detect it, and can not foresee how little extra strain may be required to seriously impair its potential strength.

Even should pneumonia not ensue, the mechanical strain of the bronchitis, especially if it leads to atelectasis and emphysema, and of repeated violent attacks of coughing, is capable of seriously damaging the degenerated right ventricle, the dilatation of which aggravates the already existing congestion.

5. Should such dilatation lead to relative tricuspid insufficiency, this is not to be regarded as a sign of danger per se, since it is really a safety valve which for a time protects the ventricle from disastrous over-distention. The tricuspid regurgitation is a criterion of the degree of mechanical strain to which the ventricle is subjected.

6. Such safety valve action not only furnishes a brief respite to the patient from the death threatening him, but affords to the physician a little longer interval in which to battle for victory, while it, at the same time, indicates the necessity of relieving dangerous congestion by cathartics, possibly also venesection, and cardiac tonics.—Therapeutic Journal.

Raise the Standard of Fees.

A Western contemporary, the Alkaloidal Clinic, advocates a general agreement on the part of physicians to raise their fees in accordance with the enhanced prices of the necessities of life which have obtained of recent years. With some conditions and limitations we heartily vote aye to this resolution. The first condition would be that the fees of the physician are those that should be raised—the physician, we mean, as distinguished from the surgeon and the specialist. The internist, the general or family physicians, constitute the most important but the most neglected class of the profession. We have conspired with the thoughtless and melodrama-loving public to

give all the honor and all the profits also to the surgeons and specialists. If the profession is to make any common stand for better wages, it must be for the sake of the general physician. His work is worth just as much as that of the operator, but he does not receive one-tenth, and in many cases, not one-hundredth as much. * * * In the second place the movement to increase the fee should at first chiefly consider the country physician, as distinguished from the city man. Either because the number of cases is greater or other means of livelihood are obtainable the city physician does not suffer from low and uncollectible fees as does his country brother. The newly-aroused professional consciousness must show conscientiousness and the love of justice, or it will not endure.—American Medicine.

Sex Production.

Kolipinski has studied sex production, taking 192 families and dividing them according to types as to the first three births. The theory which he advocates is that the person of the greatest will-power will produce his own sex first; understanding by will-power, decision, determination and resolution. From his studies he finds that more males than females are born and that twins are more common among boys than girls, that older fathers produce more boys, and that wives older than their husbands produce more girls, which last he explains on his theory that the older person has the stronger will. Prostitutes give birth mostly to boys, which he also explains on the ground of their debilitated will-power. Jews have more boy children than their surrounding races. Finally, male drunkards produce boys. Whether this is on account of the chronic alcoholic poisoning of the fathers or whether it results from the cowed and miserable state of the mothers, is left unsettled—The Journal of The American Med. Association.

Bronchitis and Bronchopneumonia in Children.

The principal thing in children who continuously take cold is to increase the physical vigor, not to live or sleep in too warm apartments, with a simple diet, pure air day and night, systematic development of the **muscular system, plenty of sleep, bathing and open air treatment as much as possible. Allow the child to go barefoot; the child that has not been allowed to go barefoot has lost one of the privileges of childhood. For the medicinal measures Mitchell mentions cod-liver oil for its general tonic effect, iron, and iodid of potash. Where there is enlargement of the lymph nodes, a course of syrup of iodid of iron is often beneficial, but all drugging which interferes with the appetite or digestion should be avoided. In the treatment of severe bronchitis, the cotton jacket, either with the oiled silk covering, or made by basting the cotton inside an ordinary undershirt, is a good plan. Counter-irritants he does not believe in. The question of alcoholic stimulants is to be decided by the individual case. Control of temperature is best done by a warm bath gradually reduced, with cold sponging of the head. The cold plunge bath is not well-borne by children. Careful feeding is of great importance. For cases that become subacute or chronic, creosote preparations are of great value. Carbonate of guaiacol has been used by Mitchell; it does not readily derange the stomach. Strychnia is often useful as a heart stimulant.**—The Journal of The American Med. Association.

Apparatus for Hypodermoclysis.

The little apparatus which Oliva has found extremely useful in private practice consists of a receptacle for the fluid to be injected, with a long tube terminating in the needle. This tube is enclosed in a larger tube which terminates just below the needle in a right angled branch with faucet. The needle and tube are sterilized before using, and the water in which they are boiled in poured into a fountain syringe, the tube from which runs into the outer tube near the top. It flows through the outer tube and the terminal branch into a receptacle on the floor, or the faucet can be turned to retain the hot water in the outer tube. This warms the fluid to be injected in the inner tube, and keeps it at an even temperature. The needle is enclosed in an adjustable outer shell with a blunt tip which prevents the needle from entering too far or changing its position when once introduced into the vein.—The Journal of The American Med. Association.

Book Notices

A Treatise on Diseases of the Anus, Rectum, and Pelvic Colon, by James P. Tuttle, A. M., M. D., Professor of Rectal Surgery in the New York Polyclinic Medical School and Hospital, etc. With Eight Colored Plates and Three Hundred and Forty-eight Illustrations in the Text. New York: D. Appleton and Company.

The author's experience in conducting for twelve years one of the largest clinics on rectal surgery eminently fits him for the work he has undertaken in the preparation of this volume. The first chapter deals with the embryology, anatomy and physiology of the anus, rectum and pelvic colon and prepares the reader for the more practical subjects which follow. Examination and diagnosis are discussed in a clear and comprehensive manner, and this chapter alone is well worth the price of the book.

We are somewhat surprised that manual examination of the rectum should receive so much attention. Considering the inconvenience and dangers of exploration by the hand, and the thorough manner in which the rectum can be brought into view by modern instruments we think the time has come when the barbarous practice of manual exploration should be discarded.

Dr. Tuttle's descriptions and directions for using the instruments for diagnosis leave nothing to be desired.

The chapter on haemorrhoids is exhaustive and practical, and will probably be more generally referred to by the family physician than any other in the book. It describes and discusses the various forms of piles and enters thoroughly into their treatment. Lest the reader should be confused by the prolonged discussion of the various methods of treatment the author recapitulates as follows:

"**Recapitulation.** — After this prolonged discussion one may be somewhat confused as to the method to be used in an individual case. Experience can only teach this. In the early stages of the disease the palliative treatment will always relieve, frequently results in permanent cure, and ought to be given a trial. In uncomplicated varicose internal haemorrhoids, with relaxed sphincters, the injection method is comparatively safe, and its results are very satisfactory in the majority of instances. In strangulated, mixed, and ulcerating piles, or those with considerable connective tissue in their substance, the clamp and cautery is by far the best method. In haemorrhagic cases, or those with atheromatous arteries, the ligature is probably the safest method. In cases with only one or two marked haemorrhoids, partial incision by the aid of Earle's clamp appears to be an ideal operation. Where there is a general varicosity of the lower end of the rectum, with prolapse of the mucous membrane, excision with immediate suture will give the best results. On account of its applicability to all varieties the ease and celerity with which it can be applied and its uniformly good results, the clamp and cautery stands first among the operations for haemorrhoids."

The work is an able and up-to-date treatise on the important branch of medicine with which it deals and we have great pleasure in recommending it to the profession.

Physicians in Hawaii.

It has been announced that all physicians now practising medicine in the Hawaiian Islands will have to take examinations to secure new licenses, on the recommendation of the board of medical examiners recently appointed. The Japanese physicians have protested against passing new examinations. There are in all 31 physicians practicing in Hawaii.—Philadelphia Med. Journal.

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MEDICAL DIAL

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Disinfection, Disinfectants, Germicides, and Deodorants.

The Medical Review of Reviews published in the December number, 1902, a paper on disinfection and disinfectants, by Dr. A. H. Doty, health officer of the port of New York, read at Albany, N. Y., Oct. 30, 1902, before the conference of sanitary officers, which thoroughly explains the different agents in use to purify infected houses, ships, and individuals after attacks and exposure to contagious diseases. The paper is instructive and valuable, coming as it does from one who has had ample practical experience in the matters whereof he speaks.

"The term 'Disinfectant,' the Dr. says, "is frequently confounded with antiseptics and deodorants, but a true disinfectant is an agent which destroys infection organisms with which it comes in contact, whereas an antiseptic only holds in check the propogation of these germs, but does not necessarily destroy them; while deodorants neutralize offensive odors and may or may not act as germicides." In fact, deodorants may furnish an additional odor, more agreeable to the olfactory organs, and dominate the disagreeable without removing any danger from what may be infectious in the other offensive smells. Scientific investigation has proved the worthlessness of many agents advertised as disinfectants, having no power of destruction to germs, and none of these should be used when the composition and strength of the materials are unknown.

Dr. Doty gives the six disinfectants that are practically all that are reliable in modern disinfection, and names them in the following order: Steam, sulphur dioxide, formaldehyde, corrosive sublimate, carbolic acid and lime. The salts of copper and lime and other agents are used, but their germicidal power is feeble. The doctor notes that while steam, sulphur, dioxide, etc., are our own creation, nature supplies disinfectants of greater importance, viz.: sunshine and air, which are destructive to pathoganic organisms with sufficient exposure. These are potent allies in preventing infectious diseases, but we cannot always wait for the process to insure safety, and other means must be employed to assist nature in its work. Proper and sufficient disinfection of rooms cannot be obtained while occupied by patients, and the burning of small amounts of sulphur, or the release of a small amount of formaldehyde, the placing of saucers of carbolic acid about the rooms, or the spraying of the apartments with so-called disinfecting solutions, the doctor thinks, are worse than useless, as they do not disinfect, but do interfere with the comfort of the patients. "All such efforts combined," the Dr. says, "would not equal in value good ventilation." It was found in one epidemic of typhoid fever in New York that with patients treated in tents the results were more favorable than in those remaining in the hospitals.

It is generally believed that the stools of typhoid cases are more thoroughly disinfected with 1-5000 or 1-1000 solution of bichloride of mercury, or a five per cent. solution of carbolic acid, the carbolic acid being the best; but if the bichloride is freely used and exposure prolonged, it will be found equally effective.

For the disinfection of all bed linen, dressings, etc., the Dr. favors a stock solution of bichloride 1-1000, which costs only one cent per gallon, and kept ready for use in a glass receptacle with a conspicuous poison label; also a label stating the strength of the solution, and a formula for making the different solutions needed. The materials to be disinfected should be left in solution for two hours immediately after removal from patients, and not stored for future disinfection. Boiling water will disinfect bed linen and other materials in an hour; but the process should be carried on in or near the sick room, as such articles should not be sent to a laundry.

The treatment of infected apartments depends upon the materials in the rooms. Clothing, hangings, carpets, etc., should be rolled up in clean sheets and removed, if possible, for steam disinfection. The woodwork of the rooms should be thoroughly washed with soap and water, then made as close as possible to exclude the air, and then treated with fumes of sulphur dioxide, or formaldehyde; the former will destroy all vermin and animal life, and also all gilding or wall paper and picture frames, while the latter, not so destructive to animal life, is preferred, as it is harmless to all decorations containing gilt, and does not bleach, or otherwise injure fabrics of any kind. School rooms, holds of vessels, and apartments that do not contain delicate furniture, or hangings, may be disinfected with sulphur dioxide, using four pounds of sulphur for each 1,000 cubic feet of space. Whether formaldehyde or sulphur dioxide are used, the apartment should remain under disinfection for eight hours, and then be well aired for two days, the time required for this purpose being longer for formaldehyde than for sulphur dioxide.

For the disinfection of cess-pools, drains, privy-vaults, air shafts, etc., Dr. Doty says nothing is better than chloride of lime, or milk of lime. The lime should not be air slacked. These may be used for the disinfection of fecal matter if carbolic acid and bichloride of mercury are not available. These are also valuable deodorants, and should be used in the proportion of one quart of freshly slacked lime to four or five quarts of water, and the chloride of lime in the proportion of eight ounces to a gallon of water.

For health officers and others who are called upon to neutralize offensive odors, and in all cases where the decomposition of organic matter is in process, lime may be used, but Dr. Doty recommends bromine as the most practical and efficient deodorant. Bromine is sold in solution in tightly sealed bottles, packed in whiting in tin boxes. It is so irritating to the respiratory tract that the bottle should always be broken under water. Four ounces of bromine to sixty gallons of water, or a little stronger if necessary, is generally sufficient to act as a deodorant, and can be best applied with a garden sprinkling pot, once or twice in twenty-four hours.

In closing his paper, Dr. Doty says: "In practical disinfection and in public sanitation, too little attention has been given to the value of soap and water; for instance, the scrubbing of the floor, walls and desks in school rooms, combined with thorough ventilation is, I believe, superior to the ordinary disinfection. Woodwork which is constantly used or handled, soon becomes greasy and dirty, and it is not improbable that this may protect specific organisms against the action of a disinfectant. Furthermore, I do not believe that the value of air and sunlight as disinfectants is fully appreciated and I am quite sure that modern sanitation will demand that these agents, as well as cleanliness, shall receive greater consideration in our efforts to preserve the public health."

Gunshot Wound of the Stomach with Report of Case.

By J. W. Andrews, M. D., president of the Minnesota State Medical Society. Read before the Western Surgical and Gynecological Association, at St. Louis, Mo., Dec. 29, 1902.

On March 7, 1902, little Joe Reichel, aged 11 years, returned to his home at 930 Marsh street, city of Mankato, from school, about 4:30 p. m. Like most boys of that age he returned from school hungry, and went to the pantry and ate a substantial luncheon of meat, potatoes, bread and cake. He then went out to play with a neighbor boy who had a revolver of, I think, 32-caliber. About 6 o'clock p. m., or possibly a little later, the revolver, in the hands of the neighbor boy, was accidently discharged, and the bullet passed into little Joe's body. The boys were but a few feet apart. The bullet entered the body at the junction of the seventh rib with its cartilage, passed backward and a little toward the right to the back, passing through the left lobe of liver, the anterior and posterior walls of the stomach, and burrying itself in the muscles of the back. The wounded boy was at once taken to his home, and the family physician, Dr. E. D. Steel, was called. Dr. Steel, a well known and very able physician of our city, at once recognized the gravity of the case, and sent for the writer in consultation.

It was 8 o'clock before we reached the injured boy. We found him with a pulse of 120, temperature sub-normal, some perspiration, and other symptoms of shock. There was almost no bleeding from the external wound. The boy was restless, appeared distressed, and had vomited two or three times, each time vomiting blood, together with some of his half-past 4 luncheon. St. Joseph's hospital is about one-half mile from the residence, and it was 11 o'clock before we could get the consent of the parents for an operation, convey the boy to the hospital, and get him ready to put on the operating table. We had administered strychnia hypodermically and also morphia, so that his condition at 11 o'clock was not materially worse than at 8 o'clock.

An incision was made in the median line, beginning one and one-half inches below the ensiform cartilage. The first thing which caught my eye when I made the abdominal incision was the quantity of clotted blood; largely, I think, blood from the wounded liver, as this was still bleeding. The wound in the liver was found to be cone-shaped, with the base of the cone on the under surface. I closed this wound from the under surface with fine cat gut sutures deeply buried and loosely drawn. As at this time there was very little bleeding from the anterior wound in the stomach, I turned my attention as rapidly as possible to removing all blood clots in view, ably seconded by my assistant, Dr. Lida Osborn. A small quantity of the stomach contents was found mingled with this blood. I next closed the perforation in the anterior wall of the stomach with fine silk, using only the Lembert suture. The bullet had not inflicted so large an opening in the anterior wall of the stomach as in the under surface of the liver, that is, it did not remain, the reason for which is apparent to all. An exploratory incision through the gastro-colic omentum at once disclosed the fact that the bullet had not remained in the stomach, but had passed through the posterior wall, as was evidenced by the clots of blood in the Bursa Omentalis. The exploratory opening in the gastro-colic omentum was enlarged, the lesser sac cleansed from blood clots, with which were mingled some stomach contents. I then grasped the posterior wall of the stomach and brought it down so I had easy access to the posterior perforation which I closed with Lembert silk suture, in the same manner as I had closed the anterior wound. I did not flush the abdomen, but contented myself with mopping it out as well as possible by the use of sponge pads wrung out of warm normal saline solution. The abdominal wound was closed with silkworm gut in the usual manner.

The little patient rallied nicely from the shock, and did real well for the first three days, when he began to fail, and died on the fifth day. The post-mortem showed that he died from septic peritonitis.

He was nourished entirely by rectal alimentation for the first three days, and then I began giving him light nourishment upon the stomach, for example, lime water and milk and malted milk. Co-incident with the beginning of stomach alimentation the patient began to grow worse.

Two questions: First, would it have been better to have cleansed the peritoneal cavity by a thorough flushing with warm normal salt solution, instead of simply mopping it out as best we could?

Second: Was the stomach alimentation begun on the third day, in any way responsible for the boy's death?

To the first question, I cannot be clear in my answer.

To the second, I would give a negative answer. I do not believe milk and lime water and malted milk taken into the boy's stomach did him any harm.

In civil practice, gunshot wound of the stomach is exceedingly rare. The surgeon is frequently called upon to treat gunshot wound of the head and chest, but rarely of the stomach. There are good reasons for this. The stomach receives, as a rule, only accidental shots. A shot fired with intent to kill, as in murder or suicide, is never fired purposely at the stomach. For this purpose the head or chest in the region of the heart are selected. Of course, it is much more frequent in military practice, but I have had no experience in that, and my paper is written entirely from the standpoint of civil practice. I have had a varied and fairly busy practice for the past twenty-five years, and yet I have had but two cases of gunshot wound of the stomach. Both were fatal. As I look over the literature of the subject, I am surprised to find so little written on gunshot wound of the stomach. Many works on surgery, exhaustive on other subjects, devote one-half or one-third of a page, or possibly only a few lines to this important subject. Dr. Ochsner, in his late and most excellent "Clinical Surgery," devotes twenty-five pages to surgery of the stomach, but does not mention gunshot wound of that organ at all. Dr. Senn, in his late work on "Practical Surgery" (1902), devotes twelve pages to gunshot wounds of the abdomen, but dismisses gunshot wounds of the stomach with but few words. However, principles are fixed and eternal, and the principles of gunshot wounds of any one of the hollow abdominal viscera apply with equal force to all others, whether they be bladder, stomach, or intestines.

Diagnosis: Assuming that the surgeon has a patient who has a gunshot wound in the region of the stomach, the first question he asks himself is, Has the stomach been perforated? It is not always easy to determine whether this be true or not; but usually the patient vomits and vomits blood. When this symptom is present we can feel almost certain that the bullet has passed into or through the stomach. Shock is of some value, but often misleading. A valuable diagnostic aid is the use of hydrogen gas, as recommended by Dr. Senn, but this can rarely be with the sand and have found how utilized to advantage in gunshot wounds of the stomach, and as my paper does not contemplate intestinal perforations, I will dismiss the subject of gas by the mere mention of it.

Treatment: Having made the diagnosis, the surgeon must decide a question of vital importance, one upon which mightily hinges the life of the patient. Shall the treatment be operative, or palliative and expectant? If the projectile is large, and the firearm is in close range and the patient has recently taken food into the stomach, then there can be no question. The treatment should be operative, and immediately operative. I think all of these conditions were present in the case of the late lamented President McKinley. If the projectile is small, the range far, and the patient has an empty stomach, the line of treatment is not as plain. Dr. Senn says that gunshot wounds of the stomach inflicted by a small caliber bullet frequently heal without operative interference. The same writer says "Clinical experience and the results of experiment show conclusively that laparotomy should not be performed simply because a bullet has entered the stomach." Dr. Warren, of Boston, equally good authority, says "safer to make an exploratory operation than to wait for evidences of perforation. A possibility cannot be counted upon as a probability."

Army records show many recoveries from gunshot wounds of the stomach without operation, but the wounds are inflicted with a small bullet at long range. Not so in civil practice, in this the wounds usually are inflicted by large bullets at short range. Since men in the profession with an international reputation do not agree as to an immediate operation, I prefer to accept that which seems less conservative, namely, an immediate operation in all cases where it is reasonably certain that the stomach has been perforated. The operation may only be exploratory, but I believe that an exploratory incision is fraught with less danger to the patient than to risk later developments which speedily prove fatal. Exploratory operation enables the surgeon to secure bleeding vessels, if there be any; to remove clots of blood, and (in importance second only to securing bleeding vessels) to remove from the peritoneal cavity stomach contents, if there be any. If none of these conditions exist, the patient's life has been but little jeopardized by the operation, and the surgeon is relieved of much anxiety. Hence, I repeat: In gunshot wound of the stomach in civil practice, when the evidence is reasonably positive that the missile has perforated the stomach, operate as soon as the patient can be prepared.

How to operate. Some good surgeons recommend washing out the stomach before commencing the operation. This is a very questionable procedure, for it is very possible that some of the stomach contents will in this way be washed into the peritoneal cavity. The stomach can best be reached and manipulated through an incision three or four inches in length in the median line above the umbilicus. Upon entering the abdomen the surgeon's attention should first be directed to controlling the hemorrhage. Second, to removing from the peritoneal cavity blood clots, and stomach contents, where these are found. Third, to finding and closing wounds in the stomach. Any method of closing these wounds, or any form of stitch which will bring peritoneal surfaces well together, and turn pouting tissue inward will suffice. Wounds of the stomach, if clean, heal very readily. If deemed wise, the omentum may be utilized in closing the wounds in the stomach. This is especially true where the perforations are large. Enderlen's recent experiments have shown how omental tissue thus utilized will undergo change, and take on the structure of the stomach tissue. I quote from the "Year Book of Surgery." Enderlen has experimented extensively to obtain repair of wounds of the stomach by means of transplanted portions of the omentum. He gives the results of his experiments on cats and dogs, and shows that after excising portions of the stomach and closing the openings by means of the omentum it (omental tissue) not only effectually closes the wound, but gradually assumes the character of gastric mucous membrane. He found that well developed gastric glands developed in transplanted portions of the omentum. I have had no experience with the purse-string suture, so beautifully described by Dr. Senn, but theoretically this is a good suture to use and one easily applied. Certainly, the Lembert interrupted suture, made with fine, strong, sterile silk, is a good one and cannot well be improved upon.

Hemorrhage having been arrested, blood clots and stomach contents having been removed, and the wounds in the stomach having been closed, the toilet of the peritoneum engages the attention of the surgeon before closing the abdominal wound. This may be done by flushing or mopping. I have had some sad experience with flushing the peritoneal cavity in other laparotomies. The septic material is carried to remote parts of the cavity and new foci of infection implanted. It is now my universal practice to mop out well the soiled portions of the peritoneal cavity with soft sponge cloths, wrung out of warm normal saline solution. The abdominal wound may be closed in the ordinary way with silkworm gut.

Prognosis: The prognosis in gunshot wounds of the stomach is always grave. A very large percentage of these cases in civil practice die. They die either from hemorrhage or septic peritonitis. Even in military practice these are very fatal wounds. In the War of the Great Rebellion, 87. 72 per cent of gunshot wounds of the stomach proved fatal. Military surgery furnishes very few cases of recovery from gunshot wounds of the stomach. More than 90 per cent of the cases attacked with septic-peritonitis following gunshot wound of the stomach die within forty-eight hours. Perforations of the gastro-intestinal canal, sufficiently large to permit extravasation of its contents are with few exceptions mortal wounds.

It is reported that some of the patients operated upon by Dr. Lorenz have paralysis, but it is hoped and expected they will recover in time. Some paralysis must be anticipated in an operation that does violence to muscles, blood vessels, and nerves, and it would seem to be a fair question to ask, if some process of unrolling a club-foot, or the replacing of a dislocated limb with moderate force, giving more time for the muscles, blood vessels and nerves to accommodate themselves to the new situation, might not be adopted with benefit and less danger to the patient than the rapid and immediate one used?

The English surgeons, it is said, did not look with favor upon the operations of Dr. Lorenz, but were rather suspicious of the results.

Formalin.

On the same morning, last Christmas day, that Mrs. Wm. A. Clark, Jr., of Montana, was dying, Dr. Barrows, of ew York, saved, apparently from death, a woman by the injection of formalin directly into the veins of the patient. Both were suffering from the same disease, blood-poisoning, and both from the same cause, child-birth. Since the successful result of Dr. Barrows experiment, several others have been reported with good effects, and tests are being made on animals of various kinds. It was tried in the case of Gonzales, the wounded editor of South Carolina, but he died, probably from other causes than septicism. This may prove one of the greatest of modern medical discoveries.

Damages for Deaths From Impure Antitoxins.

A St. Louis jury has awarded a complainant $1,000 damages against the former city bacteriologist for the death of the man's daughter, who died from tetanus after having been inoculated with diphtheria antitoxin provided by the city. Nine other cases are pending, in which damages are demanded aggregating $72,000. The jury held that the bacteriologist of the Health Board alone was responsible for the death of the child. —Medical Record.

Lord Lister Again Honored.

The Copley medal has been awarded this year to Lord Lister. This medal is regarded as the "blue ribbon" of science. It was founded in 1709, by Sir Godfrey Copley, for distribution to the living authors of such philosophical research, either published or communicated to the Society, as might appear to the Council to be deserving of that honor.—Philadelphia Med. Journal.

Cancer Research in Germany.

The committee headed by Drs. von Leyden, Kirchner and Wutzdorf, is collecting further statistics in those regions of Germany in which cancer appears to be exceedingly frequent. It is expected that physicians will be sent into these districts in order to make special studies of the cases of cancer occurring there. The German Committee claims priority in cancer research, believing that the formation of such committees in other countries followed its example.—Philadelphia Med. Journal.

Original Articles

Preventive Medicine,

By Edward H. McIntyre, M. D.t Minneapolis.

(Concluded from January.)

School Hygiene and Sanitation.

Statistics show that there are over fifteen million children enrolled in the common schools of the United States. Important as its existence is, nevertheless it was not until forty years ago that modern school hygiene and sanitation had its birth. Since then there has been considerable attention paid to the environments which are a part of school life. School buildings are built with regard to sanitary laws. Cleanliness is more rigidly observed. Sewage drainage is more thorough. Drinking water facilities are much improved, and altogether the general conditions are more favorable to hygiene living.

Not wishing to underestimate the great importance which should be attached to those conditions which underlie and to which are due many nervous and chronic affections, it is, nevertheless, to infectious diseases that we owe our most concern.

When it is considered that children up to the age of six or seven years are allowed to run and play and are subject to no restraints, and at this time without a period of transition they are plunged into a life with new environments, being obliged to remain in a sometimes unsanitary school room, it is not to be wondered at that there exists these so-called school diseases.

Statistics show that there is a decided increase in infectious diseases during the school year. This is due, unquestionably, to the mingling together of children from many localities, thus establishing many routes and possibilities for infection. In the school room there is a continual interchange of slates, pencils and books. In kindergartens their caresses bring them in close contact with each other. In both instances these habits invite infection. Children are more susceptible to infectious diseases than adults, and these habits are sufficient to prepare a means of communication.

For fourteen months, ending in January, 1896, 16,790 children were examined in the schools of Boston. Of this number, 6,053 were found to be not well, 10,000 ill, and 2,041 sick enough to be sent home. Of the number examined, 453 had contagious diseases; that number were sitting alongside of well ones, thus exposing them. When a number of sick children are allowed to remain in school it is obvious that the number of exposures will be very great. In 1899, in the same city, there were 468 specific infectious disease cases: oral and respiratory, 2,738; ear, 144; eye, 434; skin, 3,252, and miscellaneous, 10,413, making a total of 17,499. Most of these were in a condition to communicate the disease.

From a consideration of this subject and the facts which are involved, it becomes plain that there is a need of an organized corps of inspectors to afford an adequate school supervision. The duty of these school inspectors should be to visit schools, examine pupils and give such directions as will reduce the danger of spreading contagious diseases to a minimum. They should also make regular inspection of the school buildings and recommend any measures which they might deem advisable for the well-being of the pupils and teachers. Such measures are in vogue in many of the large cities, and are proved to be very effective.

The part which a campaign of education is destined to play in the prevention of tuberculosis in the next quarter of a century can hardly be realized. All hands recognize the benefits which would result from the proper instruction of the public regarding the nature of the disease and those conditions which tend towards its dissemination. Societies are being organized for the education of the masses by means of the distribution of literature, setting forth the factors in this question. The Charity Organization of the City of New York is an example of such progress.

The work of this society includes research into the social aspect of tuberculosis, i. e., the relation between the disease and over-crowding, unhygienic tenements and unhealthy occupation; also the influence of nutritious food and wholesome surroundings upon recovery; the relief of consumptives by means of provision of desirable food, fresh air, medicine and even transportation when it is deemed essential. The society publishes pamphlets pertaining to the disease, arranges for lectures and promulgates the idea in every manner possible that tuberculosis is a preventable and communicatable disease and gives results of treatment at home and in Sanitariums. It further strengthens and encourages movements for the establishment of suitable public and private Sanitoriums, both for advanced and incipient cases. The popularity of this method is fast obtaining a strong hold among the profession. The idea that this disease in its early stages is curable cannot be disputed. The advisability of curing as many cases as possible before the infectious stage is reached is obvious. It is, however, an open question as to how much can be done by means of sanitoria as a retrogressive measure in tuberculosis, as it would require a large number of such institutions to secure appreciable results.

In conclusion, when the history of this disease is considered and the recent date of the discovery of its cause taken into consideration, we may feel a certain satisfaction in the promising beginnings which have been made in combating tuberculosis. Among signs of better times are the establishment of consumptive hospitals in England, the legal regulations in many countries, efficient sanitary organizations in a number of American cities, the movement to institute state and private sanitoria and the gradual awakening of the general public that tuberculosis is a disease that can be eradicated by diligent attention to modern sanitary measures.

Smallpox.

The persistency with which smallpox clings to this country is a vivid illustration of the fact that the application of the principles of Preventive Medicine is far inferior to what Scientific Medicine warrants. There is no excuse for the manner in which smallpox has prevailed in these late years. Statistics show conclusively that in the pre-vaccination days smallpox was one of the most fatal diseases afflicting the human race. A glance at these statistics in relation to London bears out this assertion. From 1660 to 1810 the death rate per million attributable to this disease was from 2,040 to 5,000. So widespread was the disease at one time that, McCauley informs us, it was rare to find a person in London not disfigured by this disease.

After the introduction of vaccination, inadequate and imperfect in many cases as it was, the mortality greatly lessened. Since 1831 it has steadily decreased, until now there are less than one hundred per million annually dying of the disease in London. The efficacy of vaccination as a preventive measure cannot be questioned. It is one of the most scientific procedures known to medical science, and when properly carried out produces absolute immunity from the disease. The operation performed under aseptic conditions is accompanied with a minimum degree of danger.

The English, German, American and French soldiers who have been properly vaccinated can face this terrible disease in the tropics in the midst of the most unsanitary surroundings, with almost absolute immunity. The natives, unprotected by vaccination, are slain by thousands.

Knowing as we do the great necessity of this as a preventive measure, it remains for us to see that its execution is brought about. This can come only from a proper understanding of the subject by the public, which would result in a sentiment that would demand the establishment of laws enforcing vaccination. A national public health law would be effective, with proper quarantine regulations.

In Germany, where compulsory vaccination is enforced, the disease has been almost obliterated. This condition could be duplicated in every civilized country with the adoption of the same thorough sanitary measures.

Isolation, vaccination and disinfection are the methods necessary to stamp out forever this scourge, which has no place among civilized people.

Yellow Fever.

About one thousand people die annually in the United States from this disease. In the West Indies and the Gulf States it has appeared in epidemic form with great mortality. Commercial intercourse with these places has been wrought with great danger owing to the probability of a dissemination of the disease.

The recent discovery by Reed and Carroll regarding the transmission of the disease by mosquitoes is of far-reaching significance. Although this was suspected by Findley twenty years ago, it could not, however, be substantiated at that time. In view of this important discovery, more rational sanitary measures can now be established with which to deal with this disease. It will involve the destruction of the mosquitoes. The war against this common enemy can be carried on with the double end in view of exterminating both malaria and yellow fever. The breeding places of these insects must be discovered and destroyed. The yellow fever patient must be protected from them in order that infection may not spread to non-immunes. The fact that mosquitoes do not travel far simplifies the problem. This means that each residence breeds its own insects. From this data it does not appear that the eradication of the disease presents unsurmountable obstacles.

During the last year at Havana, the United States authorities have attempted to test the claims of Reed and Carroll. The city was rid of its breeding places for mosquitoes, and those suffering from yellow fever were isolated and protected from these insects. As a result of this, the disease disappeared entirely from the city. The United States law restricting non-immune travel from Cuba was removed. In view of recent developments, less rigid restrictions have been found sufficient regarding commercial intercourse. The necessity of a good sewage system became apparent from observations made by the government and scientists in relation to yellow fever in Cuba.

The isolation and protection of patients from insects is a measure of great importance. Owing to the fact that in many cases the diagnosis of yellow fever is difficult, there is presented a new obstacle, as these cases are foci in disguise from which may spread the disease.

The part played by dirt and filth in the propagation of this disease is nil, except in so far as they breed insects. In Havana it was observed that the disease existed in parts of the city which were clean, wherein resided the non-immunes. It evidently followed in the paths of the non-immunes rather than those of the poor. Regardless of hygienic conditions, the mosquito carried the infection to the most aristocratic apartments.

Major Reed and his colleagues further conclusively proved that infected clothing, linen, etc., was powerless to communicate the disease. Disinfection of these articles became superfluous, but in its stead there is demanded efforts directed towards the destruction of the mosquito. Fumigation with sulphur fumes is probably the most effective means with which to deal with these insects. Formaldehyde is probably less disagreeable. The good effects of such methods of fumigation seem to be apparent from statistics which go to show that out of 885 houses so treated, only 171 had subsequent cases of yellow fever. Reports also show that there was an absence of a single case in Santiago in 1900, after the epidemic of 1899.

The duties of quarantine officers must now be revised. They will include an inspection of non-immunes within the five days immediately following their last exposure to infection, the danger of transmission being from their own persons and not from luggage. The ships will harbor mosquitoes, consequently they must be fumigated.

The vital factors concerned in the prevention of this disease are, briefly, the destruction of the Stegomyia Fasciata by any one of a number of means, the establishment of adequate sewage disposal, and the protection of the sick, as well as the healthy, from the attacks of the mosquito. With these recommendations it can be reasonably expected that yellow fever will soon disappear.

The Plague.

First being recognized in Europe in 543, it has since appeared from time to time as a dreadful scourge. In 1655 London lost 70,000 people from this disease alone. During the last century it existed sporadically in Asia, Tripoli and Persia. In the last few years it has prevailed in China. In 1901 it was discovered in San Francisco. In 1894, Yersin, of Hong Kong, isolated the bacillus Pestis. He continued his work along this line and elaborated a serum which has been quite effective in combatting this disease. Hafkline, another worker in this field, has prepared a vaccine which acts successfully as a protective measure. The disease ravages in unhygienic countries, and is communicated by insect bites and ingesta introduced into the body. There is no doubt that by the introduction of rigid sanitation and by the employment of the means science affords, the plague may be held in check and finally entirely abolished. The difficulty which attends the introduction of sanitary reform in Asia and the East Indies, the chief sources of the disease, is of course very great. In view of present conditions it is necessary to enforce strict quarantine regulations, notwithstanding the restrictions placed upon commerce.

Insects as Disseminators of Disease.

Mosquitoes, fleas and flies, figure prominently in the propagation of disease, and when we consider animal diseases we must include in the list ticks and the crustaceans, two groups of arthropods closely allied to insects.

Two classes of diseases call for attention under this regard. In the first class are those diseases which depend upon insects for transmission, and the second class includes those diseases in which insects are accidental but nevertheless important factors. Malaria, for instance, belongs to the first group, as its maintenance depends upon the mosquito. Kill off the mosquito and malaria will disappear. Typhoid fever is put in the second class because it may be transmitted by flies, yet it is not dependent upon them. A biologist has stated a law which avers that diseases which are accidentally spread by insects, are caused by parasitic organisms known as bacteria. Another law states that those diseases which are dependent upon insects or other arthropods for their transmission are caused by parasitic animals, particularly sporozoa and worms.

For thirteen years it has been known that flies were factors in the spread of typhoid fever. Virulent germs appear in the specks when typhoid bacilli are fed to these insects. The fact that typhoid fever is spread by this means was vividly shown by investigators during the Spanish-American war. In the same manner, tubercular infection, Florida sore eye and Asiatic cholera are communicated. The practical lesson to be drawn from such findings is that the breeding places of these insects must be destroyed, and that they must be kept away from diseased material, as well as away from food.

Mosquitoes are positively proved to be the essential factor in the spread of malarial and yellow fever.

In the event of the Laveran organism entering the system, there is a very rapid development of parasites. If infection, say, took place today, tomorrow there might be as many as 576 billion organisms. Fortunately, however, their increase is governed by a biological law which permits of only a certain point being reached in an increase, and then follows a destruction of the germs. If it were not for this law, the death rate in malaria would be enormously high.

After a number of generations of asexual forms, male and female parasites appear in the blood, and these cannot reproduce further until they enter the body of a mosquito, belonging to the genus Anophles. The next generation is formed in the mosquito and the parasites upon reaching the salivary glands of this insect, are introduced into the next person bitten.

Another disease caused by mosquitoes is Filaria Hominis. The adult parasite lives in the lymphatic stream, while the embryonic types are found in the peripheral blood only during the night. The manner of infection is similar to that described in malaria. That the mosquito is the transmitting agent of yellow fever, was discovered by Major Reed, and verified by the Sternberg Yellow Fever Commission.

For humanitarian, as well as economic reasons, it becomes the duty of sanitarians to wage a mighty warfare against these insects, which are responsible for the propagation and spread of these diseases. It is to be hoped that effective means will be forthcoming for the accomplishment of this end.

Prophylaxis in Venereal Disease.

While we regard with lively interest the ravages of smallpox, cholera, yellow fever and the plague, nevertheless there is an open tolerance of a disease known as infectious which careful observers claim to be the cause of one-eighth of all human suffering.

The effects of venereal disease are less apparent to the average individual, and consequently considered by the public less vital in their concern of the public health. Statistics concerning such affections are difficult of compiling, owing to the fact that those suffering from said diseases are reluctant to make an avowal or confession regarding their trouble, fearing that in so doing they incriminate themselves. These diseases are more prevalent in the large centers of population, and it is in these places that their consideration is an important factor. According to Neisser, gonorrhea is the most universal disease, excepting perhaps measles. Other German authorities say that fully one-fourth of the male population and one-sixth of the female population have contracted the disease. By a careful personal investigation Fournier concluded that in the general hospitals of Paris, fifteen to twenty-three percent of the patients suffered from this disease. From this data, in conjunction with observation which leads him to believe that a large number of patients are treated in dispensaries and other hospitals, he concludes that one-seventh of the population of Paris is syphilitic. Venereal disease can best be estimated by attention to large bodies of men, such as armies. Cunningham's report of the health of the British army, for the year 1895, shows that over one-half of the soldiers (53.7 per cent) had been confined to hospitals during that year on acount of venereal disease. A still further review of his report indicates that of the 13,000 men annually sent home from India, twenty-five per cent were syphilitic.

The profession is beginning to recognize the grave significance of venereal disease, but the laity are still uninformed regarding the dangers attending gonorrheal and syphilitic infections. The serious complications having their source in these infections are well established in the minds of the medical profession. It is estimated that from ten to twenty per cent of the blind in our asylums date their origin from a Blenorrhea Neonatorum. It is the effect of gonorrhea on the procreative functions which should be emphasized. Neisser regards that thirty per cent of sterile marriages are due to gonorrheal affections of the male. It is also stated that from thirty to forty per cent of endo, mezo and perimetritis is of gonorrheal origin and the cause of sterility in women. The vital effect of syphilis upon public health is even of greater significance. One of the most urgent indications for the eradication of syphilis from a humanitarian standpoint is the fact that not only does the moral offender suffer, but also innocent wives and children when this disease is introduced into the home. When the latter condition prevails, there follows in its trail distinct social miseries, divorces, separations and destruction of the home. These two diseases, then, are rampant in our midst, against the progress of which scarcely a hand is raised.. In addition to the enormous suffering and distress which they cause, there is a socio-economic phase to the subject in that these diseases incapacitate men in the army and navy, as well as in private life, in the discharge of their duties. In truth, they are the most certain means of depopulation in all countries, as there is nothing which destroys the procreative function to such an extent and with such rapidity.

When it is considered that the watchword of Sanitary Science at the beginning of this century is the extermination of every contagious disease, it appears that there is something radically wrong in our social order which permits of the startling progress of the social evil, entailing no end of moral and physical injury. Gonorrhea and syphilis are infectious, consequently preventible diseases. Hence, by modern sanitary methods, they should be controlled or eradicated. When it is further elicited that in no city in the United States do there exist sanitary laws intended to prevent their spread, is it not a confession on the part of Sanitary Science of its inability to cope successfully with this problem? But when conditions are more thoroughly studied, it is evident that it is the complicated character of the situation that baffles solution. There are infringements of private rights, the restrictions on individual liberties, and finally a question of morality, that confront and embarrass legislation upon this subject. Undoubtedly the real stumbling block to sanitarians is the apparent inability to convince the public of the necessity of legal recognition or the licensing of prostitution. Prostitution is the undisputed source of all this misery under consideration. It must be readily seen that prostitution and venereal disease are closely cemented. Hence the suppression of the one means the suppression of the other. But it is impossible under existing social conditions to wipe out prostitution. Force in ages past has failed utterly to accomplish this end. It presents itself as an inevitable, if not an indispensable evil. Police crusades against the vice serve too often in the dissemination of those concerned, a thing which is of little value, as the offenders ply their trade in other localities, setting up new sources of contagion. Segregation is the least objectionable form of the social evil, viewed from a medical standpoint.

While the legal restrictions upon this subject are difficult of application, still the law can be invoked to prevent scandalous public provocation, to suppress low concert and dance halls and disreputable resorts, in connection with the meting out of severe punishment to men and women who make it a business to entice innocent and unprotected young women.

The regulation of prostitution as it is enforced in continental Europe has for its object the registration of prostitutes and their examination at stated intervals. When a woman is found suffering from venereal disease, she is sent to a hospital where she is detained until the infectious accidents are past. Men are subjected to no surveillance. The efficiency of this plan depends, of course, upon the manner in which it is executed. One of the drawbacks which attend this plan is that women unwilling to registrate as prostitutes and fearful of medical examinations and hospital confinement, abandon public houses and seek localities remote and scattered, becoming clandestine prostitutes. Thus it is brought about that segregation is defeated and the practical application of this plan effects less good than was anticipated. In many places in this country this plan would not be feasible because public sentiment is strongly against legal recognition of this practice, and because in no city in the land are there ample hospital facilities for the care of such a large number of patients suffering from these diseases. So it appears that as yet no plan has been suggested that meets with general approval.

In view of the failure of Sanitary Science to solve this problem, medical prophylaxis is suggested as a remedy. The great principle here involved is that as many cases of infection as possible should be isolated and treated. Every general hospital receiving aid from municipal or state sources should be made to open its doors for the reception of venereal cases, a condition which does not exist at the present time. Free treatment at dispensaries in connection with plain, definite teaching as to the character of the disease, the dangers of communication and the necessity for undergoing a continued treatment should be introduced wherever possible.

An educational movement which would enlighten the public regarding the dangers which are invited in licentious living, would be of excellent advantage. The moralist and the physician should work hand in hand in teaching the young man that self restraint and personal purity are the surest means of the founding of character and the maintenance of health.

Alcoholism and Degeneracy.

While it is freely admitted on all sides that Sanitary Science has done much to establish longevity by preventing the progress of infectious diseases, it is generally conceded that poverty with its environments, physical and mental degeneracy, and crime and insanity are increasing at a very rapid rate. So plain is this to sociologists, physicians and legislators, that they are discussing this subject with a view of checking this evil. It is generally considered that poverty and its accompaniments and a bad hereditary predisposition are the chief factors in the production of candidates for insane asylums, reformatories and prisons. Hence it is advised that tenements be built with hygienic appointments. Millions of dollars have already been spent to this end.

A study of the possibilities of hereditary transmission of mental and physical defects has led to the agitation of laws which would prohibit the marriage of the feeble-minded, epileptics, and other degenerates, and render impotent by surgical methods convicted criminals of both sexes. There has also been recommended as a remedy for this condition, the establishment of hospitals for the reception of defective classes; also charitable organizations for their support. It would appear that the latter means would tend to stimulate rather than check the production of this class.

By a careful examination of these various methods proposed it becomes apparent that the effects of degeneracy have been aimed at and not its causes.

It is true that poverty is responsible for dirty streets and unhygienic homes, which favor the spread of infectious diseases, but poverty aided even with these surroundings has no more tendency to produce mental degeneracy than do palaces and the environments of the rich.

Degeneracy, whether mental or physical, is due to material causes which impair the vital properties of cells and tissues. These agencies act by direct influence upon the body metabolism by their entrance into the body. Consequently they are not peculiar to poverty or wealth. They are substances which when taken into the stomach modify metabolic change either by selective organic action, or by affecting the tissues as a whole. Given in large doses they poison and degenerate. These by chemists and toxicologists are known as poisons. Physicians using them in small doses and for short periods of time, call them medicines. Clear as are the distinctions between food, medicines and poisons at the beginning of this century, we still see a confusion and an intermixture of all, in the minds of the profession and the public. Thus we see at banquet halls, food and a variety of anaesthetics and narcotics.

These narcotics diminish the sensibility of the nervous system and muscular strength and depress tissue metabolism in direct proportion as they are used. The drunkard becomes unconscious regarding his own condition as well as his surroundings. This is the deceptive manner in which alcohol gains a strong hold upon the human race. Not only does it lessen a man's ability to correctly judge his own condition, but when continually used causes a degeneration of the tissues of his body, leading to certain mental and physical degeneracy.

In Asia opium is the medium by which the people seek the road to physical and mental disaster. In this country alcohol and tobacco provide the means. Parents poisoned by alcohol, possessing morbid minds and bodies, produce similar offspring.

In the face of these facts, why is it necessary to spend millions of dollars to correct unhygienic conditions, enact laws for the regulation of matrimony, devise operations for rendering criminals incapable of extending their hereditary influence, and yet ignore the cause of seven-tenths of the pauperism and degeneracy in the form of alcohol and narcotics.

One of the most striking examples of economic inconsistency exists when a government licenses a traffic in the aid of public revenue, when said traffic results in the compelling of the same government to pay out for the support of pauperism and degeneracy ten dollars for every dollar received as a license fee.

If these are desirable articles of commerce, their sale should not be restricted or embarrassed by the government. If they are subtle, deadly poisons, they should be put in the same category with arsenic and strychnine with the same legal regulations controlling their sale.

It is a shameful practice to admit of the danger of these drugs and yet license the sale of them with the pretense that it is a traffic that cannot be wholly suppressed.

The history of inmates in insane hospitals, prisons and reformatories, confirms the conclusion of science that alcohol is a poison and a leading cause of pauperism and degeneracy. Press reports and court records show that it is a danger to public life and that it is a cause of more suicides and homicides than any other narcotic.

Why not, then, at the beginning of this century, call alcohol a poison and place it with the same class as the other drugs of this character?

Sanitation and Commerce.

This age is the most remarkable the world has ever seen. The enterprises of the last few years are but the beginning of greater triumphs. Fortunes are made with unprecedented rapidity. Vast sums of money are invested in iron, steam and electrical industries, employing the brightest intellects. These times of activity, with all the strain that accompany them, diminish the mental and physical vitality. Wealthy surroundings breed luxury and in turn obliquity. Distress and worry create a desire for stimulants. The nervous system becomes unstable and the physical and mental capabilities become exhausted. The seeking after unnatural methods of recuperation fails utterly. Sanitariums and insane hospitals are the final destinations.

Can modern medicine meet the demands of such a civilization? Has it kept pace with this startling progress of commerce? At first it would appear that it had not, but on closer scrutiny, Scientific Medicine presents also a spectacular development. All along these years, philanthropists, unselfish seekers after scientific truths, sacrificing home, friends, and even life itself, have settled themselves to a noble work. It has been with a view to protect nations, states and individuals from the ravages of disease. The commercial interests of the nations affected by national and international quarantine laws, have been closely interwoven with those of Scientific Medicine. Quarantine and isolation laws have been necessary or unnecessary, good or indifferent, in direct ratio to our knowledge or ignorance of the cause, nature and transmission of disease.

Medical science has done much for commercial and agricultural pursuits in the preserving of foods and the protection of farm industries.

The value to commerce of the discovery of vaccination and the provision for suitable sanitary methods as applied to smallpox cannot be estimated. Aside from the humanitarian point of view, estimating each life to be worth $5,000, the loss in this instance is much less than that involved by restrictions placed upon commerce should the disease remain uncontrolled by vaccine. Protection by adequate vaccination would render strict quarantine regulations unnecessary.

While the exact knowledge as to cause and the sanitary measures necessary for the control of the plague is possessed by medical science, still, in view of the origin and propagation of the disease in the far east, it is still necessary to maintain strict quarantine in regard to commercial intercourse.

In return for the benefits commerce has received at the hands of science, hospitals and institutions for scientific research should be established and maintained by funds appropriated by corporations and wealthy individuals.

Serum Therapy.

When the success of the anti-toxine treatment for diphtheria became established, there opened up a great vista of probabilities in the line of specific treatment for all infectious diseases.

It was supposed that the principles which applied to the immunizing treatment of diphtheria might apply equally well to typhoid fever, tuberculosis, tetanus, etc.

While the premises were in the main correct, still it was discovered that many of the germs did not produce soluble toxines as did diphtheria. Attempts were made by Koch and Buchner to establish a serum for the treatment of tuberculosis. They were not able to secure the toxine which they thought must be thrown out with the development of the germs. Consequently the serum prepared has not given decided results.

Tetanus produces soluble toxines which when introduced into an animal, produce anti-toxines much in the same manner as does diphtheria. It appears also that snake venom acts in the same way by producing a soluble toxine.

Many serums have been introduced during the last few years, but some are in reality not anti-toxines, but anti-infections. The elaboration of these is secured mostly by the introduction of which, when introduced into an animal, In view of the fact that they resist the invasion of microbes, these serums might be considered preventive in their action rather than curative. Hafkline's work relative to the bubonic plague was along this line. The serum he discovered acts much like vaccine and has been proven to be of great value.

The serum prepared by Marmorek in 1895, called anti-streptococcus, has given good results in erysipelas and similar infections. Baginsky, of Berlin, claims that this serum is of great value in warding off the complications of scarlet fever to such an extent that the mortality of the disease can be reduced one-half.

Attempts have been made to secure serums for the treatment or prevention of typhoid fever, pneumonia, tuberculosis, cholera and cancer, but nothing definite has been accomplished in regard to these diseases.

The discovery of the anti-diphtheric serum remains the crowning victory to the immunizing theory of medicine. It is of indisputable value in the treatment of diphtheria, and its discovery will be a stimulus for further investigation in the field of serum therapy for all time.

Conclusion.

The work of the medical profession during the last century has been such as to call forth the pride of every one of its members. Although there have been many obstacles to overcome, the general progress made is gratifying. To the medical profession is due the establishment of very hospital, every free dispensary and other medical charities.

The great bulk of the charitable work done in the world today is the direct result of this profession. Every law calculated to promote health inscribed upon the statutes of this or any other country, became so at the instigation of physicians.

The mortality records of the century show a steady decrease, a condition that has resulted in great part because the field of Preventive Medicine has been the scene of great activity.

Modern sanitation has been instrumental in the reduction of mortality of infectious diseases one-half. The last census shows that the decrease in mortality for the decade just closed was nearly two per thousand. The most notable reductions were in the deaths due to tuberculosis, typhoid fever, whooping cough, diphtheria and malaria. The decrease in mortality from diphtheria and croup amounted to one-half. On the other hand, it appears that the mortality from cancer, Bright's disease, heart disease and pneumonia has somewhat increased. It has been suggested that our ever-increasing drink bill, averaging eighteen gallons per capita annually, is a factor in the development of these diseases, as it is well known that alcohol besides causing cirrhosis produces fatty degeneration of many organs.

Notwithstanding the great service medical science has rendered humanity, scientists do not receive the recognition or the financial aid they deserve. It is time moneyed interests gave material expression of their appreciation.

On the Labia Urethrae and Skene's Glands.

By Howard A. Kelly, M. D., of Baltimore, Md.

Under the term labia urethrae, Dr. Kelly described a well defined important anatomical structure which has hitherto escaped the attention of clinicians. These labia consist, not in the rounded margins of the external urethral orifice, which have been termed labia erroneously, but in well defined lips or labia which project from two to four millimeters beyond the external meatus and by their mutual approximation cover and protect the orifice from the bacterial flora constantly bathing the vulva. If the trivalve speculum is introduced into the vagina and the blades separated, the labia urethrae are also separated and the urethra is exposed.

They also exercise the physiological function during coitus of protecting the urethral orifice. Sometimes these labia project beyond the urethral orifice on either side like long elephant ears, much more conspicuous relatively than the labia minora in relation to the vaginal outlet. Sometimes they are long and narrow. In other instances one lip is long and the other short. The margin is generally an even one or slightly crenated. In one case a fimbriated margin was found. They disappear with age and mechanical insults.

Skene's glands lie just within the urethra, at the bases of these labia. The function of these glands is clearly to moisten the urethral labia, particularly during coitus, during the violent displacement of the labia with the urethral orifice up into the vagina, when the labia urethrae need constant lubrication to obviate the injurious effects of attrition; in this way they occupy a position relative to the urethral orifice corresponding to Bartholin's glands in their relation to the vaginal orifice.

Their affections are catarrhal or gonorrhoeal. The speaker cited one case which was possibly a cyst of the left gland, due to a closed duct.

They may be treated by injection, incision or excision. In order to inject them, Dr. Kelly showed a little syringe which fully met all the requirements, consisting in a delicate blunt-pointed cannula about 5 cm. long and one mm. in diameter, a piece of simple rubber tubing drawn over the end of the larger cannula, after closing the other end, then made an excellent syringe, serving by the elasticity of the walls of the tubing to draw a few drops of fluid up the cannula. With a simple syringe of this sort the amount of fluid injected was also fully under control. After citing a number of cases treated by injection and by excision, Dr. Kelly referred to an interesting case in the hands of Dr. Hunner, his associate, in which smegma bacilli were found in the abundant secretion from one of these glands, showing how readily a tuberculosis of the urinary tract might have been inferred, even though the vulva had been cleansed before the patient passed her water.

Dr. R. C. Norris: We have all been interested in Dr. Kelly's very clear and explicit description of the anatomy of these labial folds at the meatus and of their function. I think all of us, of course, have been more or less watchful of Skene's glands just as we have learned to be of Bartholin's glands to enable us to make a diagnosis and not to overlook any case supposed to be gonorrhoeal. It is my own practice to look for the so-called gonorrhoeal muculae of Sanger in Bartholin's glands and for a similar appearance in Skene's glands to aid in a snap diagnosis, as it were, of gonorrhoeal infection, later to be studied more accurately by bacteriological investigation.

The description of the labiae of the urethra given by Dr. Kelly has been exceedingly interesting. I am sorry he did not go into the microscopical study of their anatomical structure. We frequently note that women who have borne children have a puffy, red, swollen and sometimes eroded area at the orifice of the urethra, which, however, produces no pain and is not associated with the characteristic symptoms of caruncle. I have wondered whether or not these folds have anything in their microscopic structure to throw light upon the difference between the exquisitely painful caruncle and the erosion of vascularity above referred to which is unassociated with pain. Dr. Kelly, no doubt, has had sections of these labiae made, and it would be interesting to know his results. Furthermore, with his larger experience than ours in the study of these cases and his work in the urethral tract, I would like to ask whether, in addition to the silver preparations and carbolic acid he names, he has used any of the newer silver salts supposed to be of peculiar value in the treatment of gonorrhoea. I refer to argyrol, protargal and similar silver salts. With the small area to be attacked and the results obtained so readily studied, it would seem to be an excellent opportunity to test thoroughly these newer preparations. I have been making use of them in gonorrhoeal cases, but my observations have not been sufficient to draw definite conclusions. I think no man has done his whole duty in studying a suspected gonorrhoeal case until Skene's and Bartholin's glands have been accurately studied.

Dr. Kelly's remarks are also of much interest concerning the microscopic appearances of Skene's ducts and the delicate sense of touch which enables one to find these ducts. These facts should be of use to the general practitioner who has neither the time, knowledge, nor the facilities, to study the condition bacteriologically.

Dr. O. H. Allis: I have nothing to say more than that I must thank the lecturer for the subject which has been to me an exceedingly interesting one. I am especially interested, however, in one point, the point that Professor Dickson used to speak of, that all physicians should wear gloves, and that their hands should be kept very delicate and very sensitive. For many years when I have been at the seashore I have amused myself with washing my hands thoroughly it takes off the outer coat, the tough and corneal portion. I like to wash my hands with sand about once a week. It is an ordinary experience for a surgeon to have some one see him who has a foreign body in some part; like a needle that has been run into a child's limb. Unless the fingers are very delicate they are apt to not detect it. When Dr. Kelly said he could feel these little ridges with his fingers, I took it for granted that he either wears gloves or washes his hands with sand once a week, or perhaps every day, or perhaps he has an exceedingly delicate skin. I shake hands with some surgeons and I would think they worked on the road with the pick. My own hand, although I have not done any hard work for years, is dry as a chip and has a tendency to a corneal surface. For that reason I wash my hands once a week with sand, the finest I can get at the seashore, and I have slept with gloves on in order to keep my hands just as delicate and sensitive as possible.

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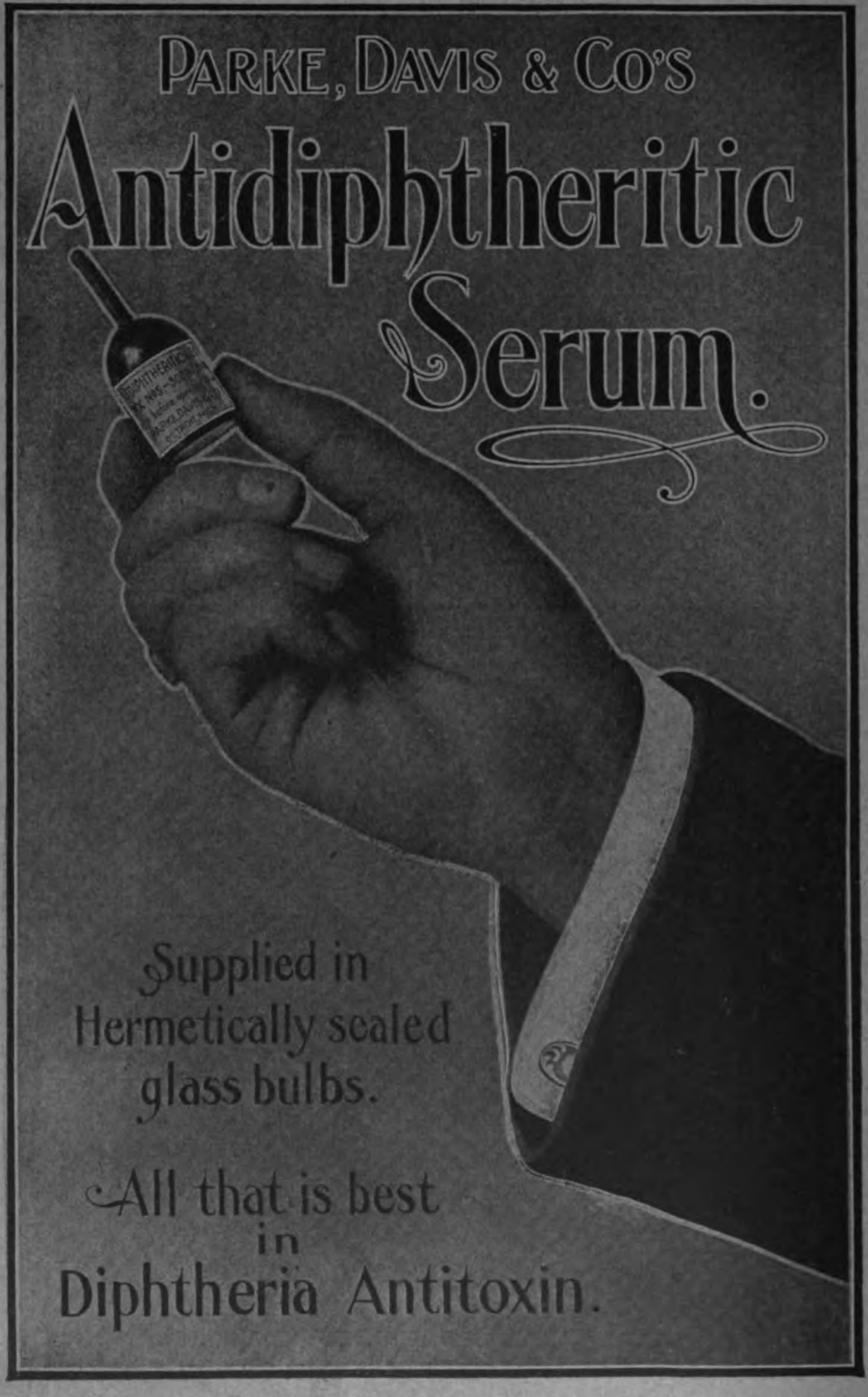

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The Passing of the Gall-Bladder.

Along with some other organs of the body that appear useless, or not absolutely necessary for the human family, such as the stomach and the appendix-caecum, the gall-bladder has now been added as one more than can well be spared for any definite purpose that it seems to exist. Dr. Roswell Park, the eminent surgeon of Buffalo, New York, has raised the question, "Why not treat the gall-bladder as we do the appendix-caecum?" Modern surgery has established the fact that animals may live and thrive without the stomach, and in a few instances it has been removed from men and they have survived the operation and their lives prolonged; it seems, however, to be an organ of considerable convenience if not necessity; but not so with the appendix-caecum. It has been clearly demonstrated that this organ is not only useless as a part of the human frame, the rudimentary remains of what might have been of some importance in nature as an organ of some animal in prehistoric ages; but it is now recognized only as a somewhat troublesome relic, and frequently a dangerous member as to life. And so with the gall-bladder. In the light and teachings of analogy there would seem to be no good reason for retaining and preserving an organ that is not present in the livers of many animals, is not always present in individuals of the same species, or of their near relatives; thus it is present in the cow and not in the horse; the goat is supplied, but in the deer it is missing, and all these animals subsist, practically, on the same kinds of food. It is present with the hog, but absent in his first cousin the peccary. Among birds its presence and absence is still more remarkable with the various species; for instance, the dove is supplied, while the hawk is able to live and eat the dove without one; the chief object of our thanksgiving dinner has a gall-bladder, but the ostrich, a larger, stronger, and fleeter than any other bird of foot, exists and outlives almost all other of the feathered tribes of the earth without this reservoir for bile. Thus it would appear that an organ so variable in its distribution among both animals and birds could have no very definite excuse for its existence to menace the comfort and life sometimes in the human family. The chief object for its presence seems to be to give pain to the patient, and a good fee to the surgeon for its removal, or for its dissection for deposits of gall-stones. As a reservoir for bile its capacity is very limited; but as one to manufacture, retain and enlarge concretions it has no equal, or rival except the urinal bladder. It is reported that in autopsies fifteen per cent. of women and five per cent. of men have calculi in their gall-bladders. Surgeons of late have found that in operations for the relief of suffering patients, they do just as well when the duct is tied off and the gall-bladder. removed at once, as when formerly a fistula was established and the organ allowed slowly to obliterate itself. It now looks as though the fiat had gone forth,"The gall-bladder must go."

Athletic Sports, Harvard University.

We believe it is the plain duty of medical men to advocate the practice of such athletic games as have a healthy influence on the physical development, and all-round improvement of the human race; and also to condemn in no uncertain terms such as may have any elements of a dangerous character, either morally or physically, to the public welfare. Any work or evercise that promotes the general health, strengthens the muscles and the mind, tends to prolong life and usefulness; while anything that has a tendency to reduce vitality, or by violence endangers life and cripples healthy action should be condemned and if possible avoided. The results of athletic games along these lines can be watched and shunned or approved as facts may appear to warrant.

The Chairman's report of the Committee on the Regulation of Athletic Sports in Harvard University is embodied in the President's for the first time this year, and it is very interesting and instructive. The following table gives the number of students engaged in the various sports; the report, it is stated, may not be perfectly accurate, but the error is not probably large.

TABLE I.

Foot-ball	241
Base-ball	193
Rowing	536
Track games	160
Lawn tennis	599
Cricket	44
Lacrosse	103
Hockey	53
Golf	30
Fencing	76
Swimming	62
Basket-ball	76
Shooting	129
Total	2,302

As some students were represented in more than one class of games the number of separate individuals is not more than 2,050.

It will be seen by the above table that lawn-tennis leads as to numbers, which is a pleasant feature; rowing comes next, while football and baseball occupy third and fourth places as to numbers; shooting and lacrosse take fifth and sixth rank in line.

The Chairman, after giving the statistics as to the expenses of the various games, etc., reports as follows:

"Foot-ball.—It will appear that the expenditures for foot-ball are steadily increasing. The outfit and supplies for candidates are expensive, as they require a variety of safeguards against injury while on the field. The number of candidates who try for the teams is much larger than it was when the sole idea was for the production of one team. The foot-ball squad, after the weeding out of the unavailables, often numbers sixty men, as the possibility of injury renders it necessary to have several substitutes for each place. Public attention has so often been called to the dangerous side of the game, that the following list of injuries for the seasons of 1900 and 1901 is supplied from the records of the attending surgeons.

TABLE VII.

	1900	1901
Muscle and bone bruises	6	14
Injuries about shoulder	4	7
Injuries about knee	12	16
Injuries about ankle	4	10
Cuts	4	4
Dislocations, elbow	1	1
" clavicle	1	1
" shoulder	2	1
" finger	—	1
Fractures, nasal bones	2	2
" clavicle	—	1
" radius	1	—
" ulna	—	1
" metacarpal	—	1
" rib	—	1
" fibula	1	—
Totals	38	61

President Eliot in commenting on the above report of the Chairman of the Committee on the Regulation of Athletic Sports, remarks as follows:

Mere bruises and contusions are not recorded where they did not take a player out of a subsequent game. The average period of disability was ten days, although this does not signify that the men were laid up for that period. In many cases they were simply kept out of practice as a precautionary measure, and they were able to attend lectures. None of the injuries above recorded were followed with permanent disability, or with serious after-effects. There were 241 who played foot-ball more or less, but not all of them were strong enough to make even the class teams. The casualties were, therefore, about 25 per cent. of all who became candidates for the sport. This fact indicates not necessarily the impossibility of conducting the game without danger, but rather the desirability of changes in the rules, to make it less hazardous, and factory, as the medical attendance has always been rendered by physicians interested enough in the students to give their services at merely nominal rates. The game is essentially a weeding process for the selection of the most powerful men, rather than a developer. At the same time it leads many young men to take an interest in outdoor life, who would otherwise pay little attention to the care of the body."

"This report is interesting from several points of view. It exhibits, in the first place, the large number of students who are actively engaged in the competitive sports taken together. The figures given are not accurate, but it is reasonable to suppose that at least two thousand students out of also more interesting."

"At present a premium is put on weight and physical strength rather than on skill and activity, although the latter are undoubtedly useful to a player. So far as could be discovered by the doctors, no deaths have ever been traced directly to injuries received on a Harvard field. There is no permanent record covering a long period of years to show whether the game is now more or less dangerous than it was in former years. Some indication may be obtained from the average expenditure for medical attendance and massage. For three years ending June, 1893, this was $1,103.94; for the three years ending June, 1902, it was $1,272.57.

This comparison may not be wholly satis- the thirty-five hundred in Cambridge, take some active part in one or more of the thirteen sports, in which an enumeration of the number of participants was made. The chairman calls attention to the fact that the expenditures for foot-ball are steadily increasing. A quarter part of all who take part in this sport are injured enough to lay them up for ten days on the average, and a much larger proportion of those who really play the game for the season are thus injured. The changes in the rules during the past ten years have tended to increase the number of injuries, rather than to diminish it. The temporary injuries are so numerous, that it is impossible to count on putting any particular eleven men into an important game on a given day. In order to provide the necessary number of substitutes for each place, the foot-ball squad often numbers sixty men. Hence large expenditures. The outfit for candidates grows more expensive, because they wear about fourteen pounds' weight of padding and armor. On the whole the game, under existing rules, tends to become slower and less visible in its details, and therefore less interesting. Moreover, the ethics of the game, which are the imperfect ethics of war, do not improve. The martial axiom—attack the enemy's weakest point—inevitably leads to the deliberate onslaught on the cripple, or the convalescent, in the opposing line; and the habitual violation of the rules, if penalties be escaped, is regarded by many as merely amusing. Of all the competitive games in which the students are interested, foot-ball is the only one against which any serious objections can be raised; but there is increasing objection to the great exaggeration of all athletic sports. There is now a series of competitive games which covers the entire academic year; and the distraction of large bodies of students from the proper work of a university, grows more intense and continuous year after year. This unreasonable exaggeration of sport and exercise has become a serious drawback also in the secondary schools. Thus many of the schools fortunately situated in the country permit their pupils to be diverted almost entirely from the study of natural history by their devotion to a series of competitive sports which covers the entire school year. In the College and the Scientific School the afternoons of many students during far the greater part of the year are devoted to play, or to looking at the games which the most expert athletes are playing. The range of elective selection among the studies of the College is seriously limited, because of the desire of students, and therefore of teachers, to avoid appointments in the afternoons. Such are some of the evils which attend the prevailing exaggeration of athletic sports; but whenever the evils consequent upon this exaggeration are mentioned, it should also be mentioned that the outdoor sports on the average and in the mass do more good than harm; for they promote vigorous physical development, and provide invaluable safeguards against effeminacy and vice."

The above comments by President Eliot on the various recognized sports of our schools and colleges are timely, and coming from such high authority would seem sufficient to call a halt in the time and attention that is now given by students and teachers to play at the expense of the devotion that should be given to study and preparation of the more intellectual exercises. If too much work makes a dull boy, too much sport may make him an ignorant one in such matters as he is expected to master and understand while passing through our preparatory schools and higher institutions for education.

Formalin Successfully Used.

Derby, Conn.,—The new blood poison remedy formalin, has been used with success in Bristol, Conn., in the case of Mrs. Napoleon Dube, when apparently she was dying. After the birth of a child Mrs. Dube was attacked by bloodpoisoning. The attending physician resorted to all known remedies, some of them most radical, but only temporary relief was gained. On Feb. 4, the doctor announced that death would come in three to five hours. After the injection of 650 cubic centimeters of formalin into her veins the woman began to recover and is now out of danger.

The injection used by Dr. Barrows, in the case that recovered, was 500 cubic centimeters of one-five-thousandth of formalin. (Dr. George F. Shrady, of New York, thinks the tests so far made with formalin prove it a failure.—Ed.)

A Baby Hospital.

Cambridge, Mass.,—A hospital just for babies, with fifty cribs, lots of air and sunshine, and a baby incubator where babies can be cared for like so many chickens, is the latest proposed addition to Harvard's already large collection of institutions. The building is to cost $136,000, of which sum $76,000 already has been given, and the remaining $60,000 is expected soon. The hospital is in memory of Thomas Morgan Rotch, Jr., of Boston, a member of the class of 1901, and is given by his classmates. The new hospital is to be built in connection with the proposed new Harvard medical school near the Fenway. When finished it will be capable of accommodating fifty patients. No baby over two years old will be cared for. In fact, some babies are expected to be so young as to require the assistance of an incubator.

Original Articles

Report of A Case Fibromyoma of the Round Ligament.

DR. M. M. FRANKLIN.

Discussion.

Dr. Melvin M. Franklin reported a case of fibromyoma of the round ligament, occurring in a patient twenty-nine years of age.

The tumor, which was about the size of a walnut, was situated in the inguinal canal, just without the internal abdominal ring. Pressure on the growth caused considerable pain and nausea.

The tenderness was markedly increased during menstruation. The periods had always been normal and she suffered with dysmenorrhea.

On operation it was found to be a hard, fibrous tumor of the round ligament. This was excised and the canal properly closed.

The pathological findings proved it to be a fibroluomyoma of the round ligament.

Dr. John C. DaCosta: I do not remember having had any case of fibromyoma of the round ligament. I have had two cases of pure fibroma of the broad ligament, one of which was, I believe, the largest ever reported. It did not spring from the round ligament, but from the shiny muscular fibres at the bottom of the pelvis.

Dr. Krusen: It seems to me that Dr. Franklin has presented for us one of the rarer forms of neoplasm which may attack the genital organs. It is interesting both from a diagnostic and pathological standpoint. It is interesting from a diagnotic standpoint, because it may be mistaken for lipoma, ovarian or intestinal hernia or enlarged lymph glands. I have operated upon two cases of fatty tumors which were rather difficult to diagnosticate, because they were in this situation. Another point in diagnosis is the occurrence of the omental hernia coming down and being mistaken for the fibromyoma at this point.

From the pathological standpoint the subject is interesting in regard to the varieties of tumors that may affect the round ligament, and also in regard to the size of some tumors that may originate from a small amount of muscular tissue. Cullen in 1896 in the Johns Hopkins Bulletin, Vol. 7, page, 112, reports an adenomyoma in a woman 37 years of age. The tumor had been growing for eight years. Two years previous to the time of operation the tumor had grown rapidly. An incision was made over the growth and it was removed, and when dissected it was found 3½ cm. long and 3 cm. wide. Microscopical examination through the tumor showed areas of rather translucent character. There was a mucous membrane similar to the normal uterine mucous. Such findings may, I think, throw some light upon the origin of the growths. Leopold has reported a case of lymphangeiectatic myoma; Sanger a case of sarcoma of the round ligament. Another interesting point is that during pregnancy these tumors often increase in size and also during menstruation. This probably indicates their relation to the uterus. The most frequent situation is upon the right side. As an illustration of how a small muscular fibre may give rise to a large growth, Doran reported a sixteen pound tumor arising from the tiny ovarian ligament. This shows how in the mere presence of fibrous tissue large growths may proliferate.

Dr. Maier: I would like to ask Dr. Krusen whether the tumors he has just mentioned were situated in the round ligament as it came through the inguinal canal, or in the broad ligament.

Dr. Krusen: They were all round ligament tumors external to the ring.

Dr. E. E. Montgomery: I have been greatly interested in hearing Dr. Franklin's paper, and feel that the society is indebted to him for the presentation of so rare a case. Judging from my own experience, I should say the tumors of the round ligament are very rare. I have never seen one, but recognize the fact that my experience has not been sufficiently large to afford evidence that such growths do not occur. We can readily realize that in the round ligament, which contains both muscular structure and blood vessels, there is ample material for the development of this class of tumors, whether we assign their origin to the muscular structure of the round ligament itself or to the muscular wall of the blood vessels. Their infrequency in the round ligament is readily explained from the fact that the structure is rarely subject to injury. The point of diagnosis is one of very great interest. I can readily see how such a growth could be mistaken for conditions such as were supposed in this individual case. In listening to the paper I at first thought the condition had followed an operation upon the round ligament, as the doctor said the ligament was shortened, but this was evidently due to the growth taking up the slack of the ligament.

Dr. John M. Fisher: Dr. Clark, I believe, a few years ago reported a case of coincident sarcoma of the uterus with fibromyoma of the round ligament, demonstrating the importance of making a microscopical examination. The case was either one of fibromyoma of the uterus and sarcoma of the round ligament or sarcoma of the uterus and fibromyoma of the round ligament. I think the latter was the condition. It is an interesting point to note, I think, in this particular case.

Preliminary Report of an Operation for Abdominal Pregnancy of Twenty-One Months' Standing.

Dr. C. P. Noble reported the clinical history of this patient, who was a multipara, 30 years of age. She missed her menstrual period in March, 1901. Two weeks later she was taken with a sharp, agonizing pain in the right iliac region, diagnosed by her physician as appendicitis, and was in bed for three weeks. Two months subsequent to the date of expected labor she consulted a gynecological dispensary, where a diagnosis of "tumor" was made, and medicine given "to dissolve it." She remained under this treatment for three months. She was finally sent to the Kensington hospital for women, Philadelphia, with a diagnosis of fibroid. Dr. Noble made a presumptive diagnosis of abdominal pregnancy and verified the diagnosis by abdominal section. The fetus occupied the left side of the abdomen, extending into the pelvis, the uterus was pushed to the right and elevated. The round ligament and tube ran over the face of the "tumor." The sac was so thick that it was impossible to outline the fetal parts. The ovarian and uterine vessels on the involved side were ligated, the fetus and sac elevated out of the pelvis and the lower end of the mass turned upward. By getting at the mesentary vessels from below and behind it was possible to control the bleeding without difficulty. The uterus was not removed. The patient made a satisfactory recovery.

Discussion of Dr. Noble's Paper.

Dr. E. E. Montgomery: The case presented by Dr. Noble is one of very great interest from a diagnostic standpoint. Every one who has had an opportunity of observing a large number of patients appreciate the frequency of cases which will come under his observation where it is difficult to determine whether he has to deal with a pregnancy, fibroid tumor or other abdominal growths. I remember a case which came under my observation years ago at Jefferson Hospital of a woman who had gone fifteen months from the time she conceived without delivery. Two months subsequent to her conception she had what she supposed to be an abortion. There was a discharge of clots of blood and she suffered great pain. A bloody discharge continued for some weeks subsequently. A few months later she recognized fetal life, and again became reconciled to the fact that she was pregnant. At the completion of what should have been the normal period of gestation, however, labor did not occur. At the time the patient came under our observation she presented a tumor which filled the abdomen to nearly the size of a woman at full term of pregnancy. Examination revealed fluctuation while percussion over the tumor gave resonance. On examination per vaginum the uterus could be recognized situated in front and somewhat to the left of the mass. While a portion of the tumor felt solid, one was unable to palpate and recognize distinctly its parts. The history of the case and the conditions present led me to form the diagnosis of ectopic gestation, in which the fetus had undergone maceration and decomposition, and the resonance in the sac was the result of the gas thus formed. Upon opening the abdomen we found a condition similar to that which I had expected. The uterus was in front of the mass, the tumor occupied the abdomen above, and the wall of this tumor was made up of a membranous sac to which the placenta was attached at the upper part. The placenta was without vitality, was easily pulled off with the portion of the sac to which it was attached and without hemorrhage. The entire lining membrane of the sac was covered with macerated material. With the removal of the fetus the sac was thoroughly cleaned, stitched to the abdominal walls and packed with iodoform gauze. The intestines were closely adherent to it and formed a part of the sac wall, so it was impossible to attempt its removal. The convalescence was slow; patient finally recovered. The second case which comes to my mind was that of the wife of a physician in the upper part of the state. On examination a tumor was recognized to one side of the uterus, which filled up the pelvis. The history and the examination of the case led me to unhesitatingly pronounce it a fibroid tumor. It had been in existence for two years. The patient was unwilling to submit to an operation, became pregnant and gave birth to a child without interference to the sac, and, so far as I know, she still carries it. Another patient treated at the Jefferson Hospital is of diagnostic interest. She had a mass which had been pronounced pregnancy by several physicians. One physician, an eminent gynecologist in the city, pronounced this a pregnancy, and saw the patient several times during the supposed gestation. The woman, however, did not attain to the size she supposed to be proper, and the time passed beyond which labor should occur. She was brought to the hospital, and even then the growth was considered a delayed pregnancy. There was found situated in the vagina a mass the size of a fetal head, so divided as to lead to the belief that the fontanelles could be felt between the masses. On examination over the abdomen a mass could be pushed away and felt to rebound against the hand. This was supposed to be the body of the fetus. In examining this patient, however, I felt satisfied from the surfaces intervening between the vaginal mass and the finger that it could not be within the uterus. If it was a fetus it was evidently situated anterior to that organ. I hardly believed that we would likely find an ectopic gestation in that situation. The sensation of free movement of the upper part was due to the fact that the tumor was connected with the fundus of the uterus by a rather thick yet flexible pedicle, which permitted the fundus to be pushed away and to return against the hand. The latter was favored by a considerable amount of ascites. As soon as the abdomen was opened a considerable quantity of fluid was discharged and the mass projected into the wound. A number of fibroid tumors occupied the body of the uterus. I think these cases indicate the difficulty in diagnosis, which will sometimes lead the patient to go for some length of time under the observation of careful men, and they may be mistaken for other conditions.

Dr. Krusen: Dr. Noble's interesting case recalls a postmortem which I had in 1893, while a resident at Jefferson Hospital. I had the opportunity through the courtesy of Dr. Hearn of making a postmortem in the case of a patient in the northern part of the city. The abdomen had been gradually increasing in size for ten months, and no menstruation had been present for that time. The patient had been seen before in consultation by the late Professor Parvin, and the condition was such that operation was thought inadvisable. The patient died, and upon postmortem there was found within the abdominal cavity a full sized foetus larger than the size of a baby a month old. A haematoma occupied the position of the uterus. The head of the foetus was directly under the spleen. The case illustrates the tolerance of the peritoneum to the development of the foetus. This was a case in which undoubtedly rupture had occurred. The hemorrhage had not been such as to produce death, and the foetus had gone on to full development, weighing over ten pounds. The specimen is now in the museum of the Jefferson Hospital.

The very interesting and perplexing question to the surgeon is the treatment of the live placenta in cases of ectopic gestation. I have had an opportunity in two cases of having to contend with this difficulty. I think Dr. Noble is to be congratulated upon his success in this case.

Dr. C. C. Norris: I think the specimen is a very interesting one indeed. I have never seen one so large. While a resident in Baltimore I saw one specimen somewhat smaller which been in the abdomen for nine or ten years.

Dr. Noble closes: I have very little to say. The point raised by Dr. Krusen is of course the crucial one, how to deal with the hemorrhage. These cases are so rare that there are very few of us who have the opportunity to acquire views from practice. This is the first full term pregnancy of this kind that I have ever seen. I have operated upon nearly a hundred cases of ectopic pregnancy, but this is the first one advanced beyond the fourth month.

I think it is best to enucleate the whole sac, provided one can do preliminary ligation. If the placenta is attached to the intestines we know that we cannot do preliminary ligation. On the other hand, if the placenta is in the pelvis we know perfectly well how to deal with the ovarian and uterine arteries or with the anterior branch of the internal iliac. I should prefer to enucleate the sac under those circumstances. In a case having its blood supply from the mesenteric vessels my own action would be to pack the sac with gauze and leave it.

Phlegmonous Erysipelas.

In a phlegmonous erysipelas we have to deal with a disease which appears to resist all forms of treatment and which rapidly wears out the patient and causes much anxiety upon the part of the attendant. The fact of its being a rare disease gives us some comfort. Like erysipelas of the face it runs a fairly typical course and in a majority of cases ends in recovery. It is characterized by an acute specific dermititis, inflammation of the smaller lymph channels and of the subcutaneous cellular tissue. It starts from an infected wound, the erysipelas coccus having gained entrance, and either at time of inoculation, or subsequent to accident, other micro-organisms have gained a foot-hold and the double infection manifests itself by an increased severity of all the symptoms of heat, redness, pain and swelling. In true erysipelas the inflammatory process is confined to the superficial skin, the smaller lymphatics, and deeper cellular tissue; but in the mixed infection all the destructive organisms are found in the deeper structures and the tissue itself.

The skin in the phlegmonous erysipelas will turn almost black as the disease progresses, and usually desquamates along its linear furrows. The finger nails are also discolored, but do not become loosened unless there is very active inflammation at their junction with the skin and associated with pus formation. The temperature is high for the first few days but soon goes down to normal, or nearly so. The appetite is lost, there is nausea and vomiting, and a very pronounced feeling of languor and exhaustion. During convalesence the abscesses increase in numbers, though smaller in size; and for days or weeks there is an occasional swelling of one side of the face, neck, or hand, which comes on rapidly, remains from twenty-four to seventy-two hours, then subsides without rupture or suppuration. In other ways the patient feels well but appreciates a cool dark room, as strong sunlight seems to increase the trouble and causes swelling of all parts previously affected.

The swelling in erysipelas proper is uniform. In the phlegmonous erysipelas this is not true, as there is often seen a tumor of immense size in the neck, and in the cheek a very small one while on the opposite cheek the swelling may be as large as a coffee cup. In the former there is often an exudate of serum, and in a few cases pus, the abscess opening and soon disappears, leaving a thin dry crust which quickly passes away without leaving any scar or swelling.

In the complicated type the loose, distensible tissue with the skin superimposed is not swollen as much as in the uncomplicated form, the exudate seemingly being attracted to definite areas. From this it may be inferred that the immense swelling of the hands, face and neck, so characteristic of this form, is thus increased.

The enlargement and proportionate deformity may remain permanently, and in the cases referred to, numerous hard nodules remain to mark the site of the abscesses. Time does much to remove these growths and operation is not demanded. It sometimes happens that the conditions may become reversed, and the deep cellular inflammation may come to the surface and run as a simple erysipelatous infection. The symptoms are then much ameliorated and otherwise tedious and exhaustive attack is aborted.

The combined metabolic functions of the existing bacteria entering the circulation produces fever, and the pain and swelling increase the severity of the symptoms by irritation of the cutaneous nerve filaments.

As a rule abscess formations are circumscribed though distant parts become infected through an acute lymphangitis, and in a few cases, almost every part of the body may have glandular enlargement with abscesses. The glands of the axilla and groin, in fact, the protected parts of the body, are not so liable to become invaded, at least this was true in the two cases under my observation, in both of which only parts exposed to the air were affected. Very large abscesses sometimes form with extensive suppuration followed by gangrene. The lung tissue may become involved and death speedily follow. In the phlegmonous type the erratic erysipelas may migrate from the foci of inflammation to any part of the body, though the distance between point of inoculation and metastatic formation is usually limited, as from foot to knee and finger to metacarpal region. In this form we are more apt to have a definite change in the color of the skin, either due to a general systemic disturbance of the circulation or the gastric complications as seen in drunkards.

The parts of the body exposed to the sun and air swell up, become more red and painful. Why such a condition should be brought about is not definitely known, but is probably due to the actinistean properties of the solar spectrum acting as an irritant to the already existing dermatitis.

The muscles, tendon sheathes, and joints may become permanently injured if the process extends inwardly and becomes diffuse.

The tendon sheath of the middle finger of the right hand became extensively involved in one of my cases, and the tendon itself underwent rapid destruction necessitating its removal as far back as the annular ligament and anteriorly to the third phalanx.

Metastatic abscesses formed in the sterno mastoid and were very troublesome. This was followed by paroditis and suppuration.

There is always danger that the process may extend into delicate parts and leave injuries of great import, such as blindness, parophthalmia, iritis, ulceration and suppuration of the eyeball, optic neuritis and destruction of the optic nerve, suppuration of the ear, dysphagia, erysipelas pneumonia, pleurisy, peri, endo and myo-carditis, gastro intestinal complications, phlebitis, and haematogomous icterus, which latter is a precursor of speedy death. Uremia may sometimes follow but this is considered rare as kidney disease is already established in most cases in which such condition has been observed. When acute nephritis is known to be a complication without previous kidney disease, there need be no alarm as it will gradually subside as the original disease improves.

Following an attack of erysipelas in any form oftentime results in the permanent cure of other existing diseases as have been noted by many observers, and to some extent has been employed as a therapeutic measure.

In the treatment of phlegmonous erysipelas the patient should have rest and quiet, the room should be darkened and ice cold water containing 32 grams of magnesium sulphate to the liter, should be applied to the parts involved. This will be found to exert a very soothing effect and will take the place of the usual remedies.

Surgical interference is necessary whenever pus forms. Potassium iodide, Fowler's solution, strychnine and brandy are good internal drugs. Iron is also of decided benefit. The diet should be light and easily digested.

President Eliot in his address to the students of Harvard Medical College, Dec. 17, 1902, said that he remembered having heard Dr. Wyman, of Cambridge, say, when he retired from practice, that he had looked over his cases since he began to practice, counted them all up, and that the deaths were only one in sixty-nine cases. He (Dr. Wyman) added that that is the foundation of all quackery in the world. Sixty-eight out of sixty-nine get well.

Death of Medical Student.

James L. Fitz-Gibbon died last month at his father's home in Minneapolis of typhoid fever. He was born in Illinois, Aug. 8, 1875, and a graduate of Southside High School of this city. He was prominent in athletics, and popular with his class. He was a member of the 4th year in Hamline University Medical School. He leaves a widow and one child.

Morrill Wyman, A. M., M. D., LL. D., died January 30, at his home in Cambridge, Mass., aged 90 years. Born July 25, 1812, he was graduated from Exeter Academy in 1827, and from Harvard College in 1833, and from the Harvard Medical School in 1837. In 1836 he was house physician at the Massachusetts General Hospital. From 1853 to 1856 he was adjunct professor of theory and practice of medicine in the Harvard Medical School. In 1875 he was elected an overseer of Harvard College and was given the degree of LL. D. in 1885. He was also a member of the American Academy of Arts and Sciences. Before being graduated from the Harvard Medical School, he assisted Dr. W. J. Walker, of Charleston, a well known surgeon of that time. Dr. Wyman was the first man in America to perform paracentesis thoracis. In 1893 Dr. Wyman presented to the city of Cambridge the medical library belonging to Professor Tiedemann, of Heidelberg. He was at one time consulting physician to the Massachusetts General Hospital and to the Cambridge Hospital.—Philadelphia Medical Journal.

Results of X-Ray Treatment.

A paper by Dr. P. R. Turnure and discussion.

Dr. P. R. Turnure read this paper, which was based on observations extending over a period of two years at the New York and Roosevelt hospitals. The total number of cases treated at the Roosevelt Hospital during the last twelve months was ninety-four, but he had been able to follow and keep satisfactory records of eighty-two. He had made use of three different coils, each one more powerful than the preceding. At present he was using a twenty-inch coil, and preferred this one, because the results seemed to be more quickly obtained with it. He had been unable to formulate any general rule about x-ray tubes further than that the resistance should be low, and the tube should be able to carry a large quantity of current without changing its vacuum. An exposure of five or ten minutes was given, and the method preferred was to give the exposures every day for the first week, and every other day the second week, and then after an interval of two weeks resume the treatment as before. He had had five cases of epithelioma of the nose, all of which had done well. One now under treatment, after eight exposures, showed marked improvement. There were three cases of epithelioma of the lip. One of these had done badly after a vigorous x-ray treatment for fourteen days. The treatment caused deep sloughing. He had had two cases of epithelioma of the penis, one of which only had done well. The general results in all of the epitheliomas were good, and he thought the x-ray treatment was indicated in these before operation. The results were quite different in carcinoma. He had had five cases of carcinoma of the neck, and ten cases of carcinoma of the breast, three of the latter being primary. Two of these were absolutely inoperable. Of the seven recurrent carcinomata of the breast only one was successful to any extent. All of them, after a short period of improvement, seemed to follow the natural course of the disease. This temporary improvement could be noticed in all cases, and he attributed it solely to the psychic effect of the new treatment. Sometimes this lasted as long as six weeks, and then the disease progressed as before. In one case, to which great attention had been given, the disease spread quite rapidly, the progress of the disease actually seeming to be stimulated by the x-ray. In two cases of sarcoma, one of the limb and the other of the neck, the pain was relieved for a few weeks. He had only treated three cases of tuberculous glands of the neck, and all of these were in children. All of them improved greatly after four weeks of treatment, but all of this improvement he attributed to the good care the children received while in the hospital. Two cases of tuberculosis of the larynx were treated, one for four and the other for six weeks, without any improvement. Two cases of lupus were treated, one for eight and the other for twelve weeks. They appeared to have been cured. Three cases of erythematous lupus were treated. Two did extremely well, though both of them required over four months' treatment. The third, after seven months of treatment, was only slightly improved. Five cases of chronic eczema of the leg were treated by the x-ray, and all were cured apparently as a result of the irritation produced; nevertheless, the treatment was much slower than other well known methods. It was worthy of note, however, that the itching ceased very promptly after the x-ray treatment. Dr. Turnure said he had treated one woman with the x-ray for the purpose of removing hair from her face. The treatment had been carried out very cautiously, and after four months the hair had been entirely removed from the area without any burning. If this result proved to be permanent, he would treat the rest of her face, because the woman had tried the electrolytic method and had found it very painful.

Conclusions.

The results that he had observed in x-ray treatment were certainly confusing, but the first that occurred to him on studying these records was that x-ray treatment, to be successful, must be used upon superficial disease processes. If the x-ray exerted its influence very deeply, it was almost certain that some of these effects would be observed in x-ray workers, which, so far as he knew, was not the case. Glands, which were often secondary to epithelioma, were not really epitheliomatous deposits, but were the results of secondary infection. The speaker said he was extremely sorry to have to report such poor results, for, a year or more ago, he had been very enthusiastic over x-ray treatment. Undoubtedly, mauy cures were effected in superficial growths. Most of these cures appeared to be permanent, but he had had one recurrence take place after eight months after what appeared to be a perfect cure.

Dr. H. Lilienthal said that he had watched some of the cases treated by the x-ray at the hospital. He had, apparently, seen epitheliomata cured, but he had never seen a deep growth cured by the x-ray alone. At present, he had under his care a small round-cell sarcoma of the scapula, which had been proved to be of the malignant type. Through a generous incision, a piece had been removed for examination. Ordinarily one would not expect this incision to heal, but under the use of Coley's fluid and the x-ray there had been a gradual flattening of the tumor, the wound had healed promptly, and the skin had become markedly pigmented. Of course, Coley's fluid was used here, and while there was only one reaction from this, and that might have been an accidental infection, she was now taking enormous doses of this fluid without any reaction. This patient had been exposed to the x-ray for fifteen minutes on alternate days. The case had been doing so well that he had not felt called upon to operate. Dr. Coley was of the opinion that his fluid only benefited when it caused a reaction; if this were true, then it might be very properly argued that in this case the good result was due to the x-ray treatment and not to Coley's fluid. While the results reported in the paper were disappointing, it was quite possible that we had been altogether too optimistic regarding this agent; for, as a matter of fact, we knew very little about it. The x-ray treatment at the present time should be reserved for inoperable cases.

Dr. Robert T. Morris agreed with the last speaker that, in this experimental stage, only inoperable cases should be subjected to the x-ray. He had had one case of lupus of the forehead, which was practically well, and a case of epithelioma of the lip in which the cervical glands had been so much involved that he thought operation was not indicated. The latter case was now apparently well. In a case diagnosticated as inoperable sarcoma of the parotid, the x-ray treatment had, apparently, produced a complete cure. In another case of very extensive recurrence in the glands of the neck, after amputation of the breast some improvement had been effected, but the patient had not followed the treatment very closely. He was disposed to feel, as did the reader of the paper, that the x-ray was not of great value where the malignant disease was deeply situated. He had one case of epithelioma of the trigone of the bladder that was being treated by the x-ray by way of the rectum and a suprapubic incision. At last accounts the case was decidedly better. A very interesting point was, that neoplastic deposits in the glands seemed to disappear under the influence of the x-ray.

Dr. Carl Beck said he was convinced that if sufficient treatment were given to any epithelioma it could be cured, but he also believed this was not so good a method as thorough extirpation of the epithelioma by the knife. The x-ray should be reserved more especially for special cases, as for example, epithelioma of the eyelid, where a particularly good cosmetic result was desired. He had seen a number of cases in which the disease had recurred just as rapidly after x-ray treatment as after operation. Last spring he had presented to a medical society an old man in whom an epithelioma of the upper eyelid had been completely cured by twenty exposures to the x-ray, yet very shortly afterward the disease appeared in the upper lip, showing how widely disseminated were the cancer cells. The use of protective shields was a mistake, because our object should be not only to have the x-ray tube as near as possible, but to secure a wide effect. He had noticed that those who used the x-ray very carefully, in the hope of avoiding burns, were the ones who obtained only very indifferent results. It was often well to run considerable risk of burning the patient. He had met with cases in which improvement had only been effected after the use of very strong doses of the x-ray. He would not advise the treatment of carcinoma of the stomach and of the bladder by the x-ray, on the principle that it was unwise to leave for the x-ray what could be done by the scalpel. He believed that there was not a case of lupus that would not yield to the x-ray.

Dr. Thomas H. Manley complimented the author of the paper on his practical and candid treatment of this subject. He thought the paper and the discussion showed clearly that the sphere of x-ray treatment should be limited to the treatment of lupoid growths. What had been said about the disappearance of glands bore out his own experience, that when the local source of irritation or infection was destroyed the glands would take care of themselves.

Dr. Turnure closed the discussion. He said he wished to make clear the fact that one of the cases, indeed the one that had apparently given the best result, had already recurred. He was not in a position to say at present how many recurrences there would be. The scar on the face from x-ray treatment had been found much less disagreeable than the scar usually left after a cutting operation. His experience had been that the recurrence from operation was greater than from the x-ray. This was his present opinion, although it was quite possible that he might have reason to change that opinion in the near future. The result in the removal of hair from the face was certainly far better than from electrolysis.

Clinical Reports.

February 13 our professor of nervous diseases presented another very interesting case: Locomotor Ataxia. The patient was a colored man, a widower, 31 years of age, musician by profession; family history, negative; previous history, good. Bad habits, smoking, chewing and heavy drinking. Present illness: The patient's trouble started 5 or 6 years ago with numbness over the pelvis and extending down the thighs. Some numbness existed also in the upper extremities. The patient complained of tightness around the chest. At times he experienced shooting pains, and years ago headache, lasting five or six months. Pressure on the back gave a peculiar sensation. Being about gives a sensation as walking on cotton. Taste, hearing, smell were normal; memory as good as ever. Patient was not more emotional at present than formerly. The appetite is good. Patient sleeps well. Bowels are constipated. Incontinence of urine has lasted for six months. The sexual function abnormal. Patient relates no history of trauma, but syphilis (and gonorrhoea) seven or eight years ago.

Physical History: The patellar reflex was absent. No clonus. Sensation almost normal. The pupils were contracted, and gave no respondence to light. Accommodation was lost. The gait was unsteady, and, with eyes closed, standing or walking, if not for the assistant patient would have tumbled over.

Neuritis, cerebral tumor, feigning, combined sclerosis and primary latteral sclerosis were ruled out.

Progress, grave.

Etiology: Syphilis, 60-96 per cent; nerve strain, etc.

Treatment: Potassium iodide was suggested; is of no avail. Rest, electricity, baths, massage, easily digestible food.

Patient, a little baby boy, seven months old, which did not weigh more when eight weeks old than at birth. The mother had nursed the child a few weeks; since then everything, the mother said, has been tried, and nothing seems to agree with the baby. Two kinds of cow's milk and one kind of barley water had been given. Condensed milk was given, and now the gain of weight was a pound a week. Bowels moved regularly. The baby did not sleep well at night, and only two hours in the morning and fifteen minutes in the afternoon.

Shortly before Christmas eczema developed in the face, and at present also some inflammation on one leg and hand.

Face not washed with water and protected from scratching.

M. is a patient in the C. H. of Minneapolis. He is fifty-two years of age. The patient is a laboring man of medium size, muscular, and a well developed chest. Father and mother are dead; causes of deaths unknown.

Mr. M. is addicted to the use of snuff and alcohol. The ingestion of spirits has caused a dilatation of the capillaries of the nose and cheeks. The teeth are decayed to a great extent and blackened by snuff. Close to the right snynaorbital foramen the patient has a small mold. The submaxillary and cervical glands are not enlarged. The left sternoclavicular articulation is movable. The patient being left-handed, hence the muscles are more developed on that side, and the contour of the chest more prominent. The heart is normal, though a little rapid. The arteries were sclerosed. The expansion of the chest was good. In the median line of the chest near the ensiform the patient had a chloasma. The liver was somewhat enlarged. The spleen was not palpable. There was tenderness over the bladder and on palpitation pain was felt at the destal end of the urethea. The patient had dribbling of urine. The passing of a catheter twice a day for the emptying of the bladder revealed no obstruction from an enlarged prostrate. Examination of urine gave albumen, pus cells and casts. Hence the diagnosis is nephritis with complication of the bladder.

Patient, aged 53 years, well preserved. Family history good. Expression of face did not indicate any pain. Conjunctiva somewhat inflammed. Teeth irregular. Else very healthy. The tongue moist and steady. Chest is well developed; muscles a little flabby, pulse rate, 65 per minute. Pulse full and arteries compressible. At the age of nineteen the patient had typhoid fever, and ten years ago malaria. The spleen was not enlarged; liver normally palpable. Patient complained of costiveness and acidity of stomach; says he had dieted himself by fruit and moderate ingestion of foods, leaving little residue.

Diagnosis: Mixed hemorrhoids.

L. LIME.

Appendicitis.

An Egyptian mummy of 2,000 years ago recently examined, showed evidences of having died of appendicitis, so that the disease is not by any means new. Four hundred cases were operated on in London hospitals last year, all but ten successfully. Sir Francis Treves has operated with success on 100 consecutive cases. It is said that the modern fine flour is one of its causes. The increasing occurrence of the trouble has opened a new field for insurance in England. One of the most prominent firms in Lloyd's has made a new departure in the form of policies insuring against appendicitis. For a premium of 5 shillings the insured, should he undergo the operation, will have all his direct expenses paid up to $1,000. In the event of his death under or as a result of the operation a total sum of $1,000 will be paid.

The New York Medical Critic announces that each subscriber to that journal will receive a free copy of the Medical Index next month (March, 1903).

The volume will contain names, place and date of publication, price, circulation and names of editor and publishers of over 600 of the principal medical publications in this country and abroad, and also the titles and authors of each article published during the year 1902, arranged according to subjects and alphabetically. When it is noted that the list is complete up to January, 1903, it should prove especially valuable in bridging over the period which has elapsed since the index medicus was discontinued.

Considering the expenditure of time and money in the preparation of this volume, and the liberality of the publishers in presenting it free to the profession, the enterprise marks a new era in medical journalism and merits appreciation and success.

RADICAL ACTION SUGGESTED.

There was a disposition on the part of some members of the conference to adopt radical measures. A resolution was offered proposing that the secretary of war be advised that there is danger in bringing troops through the city of San Francisco.

Surgeon General Wyman advised against the adoption of this resolution. Another was proposed placing an embargo on railroads leading out of California unless certain steps were taken by the health authorities toward the suppression of the plague. Neither of these resolutions were adopted.

It was decided to send copies of the resolutions adopted to the state and city boards of health with a request that they make a statement as to their proposed plans.

At the opening of the meeting the following resolution was adopted:

"Whereas, This conference believes without a shadow of division of opinion that the plague exists and has existed in San Francisco, the representative from California, Dr. Gardner, is expected to present to this conference within as short a time as possible definite signed assurances from the governor of the state and the mayor of San Francisco, which will bind the city board of health, so far as those men can control those offices, to assume each their several and joint responsibility in the suppression of the plague, and to pursue them to the utmost in harmony with each other and in full co-operation with the United States public health and marine hospital service.—Tribune, Minneapolis.

Medical Miscellany

Dr. Charles Barrows, of New York, Saves a Patient with a Temperature of 108.

New York, Jan. 16.—At the last meeting of the New York Obstetrical Society, Dr. Charles Barrows, of this city, submitted a report of an experiment with formaline, a drug known as the strongest of antiseptics, which he had made in Bellevue hospital on a patient who after giving birth to a child, had a temperature of 108 degrees and a pulse of 160. When the patient was admitted she was suffering from sepsis, or bloodpoisoning.

The patient was a negro woman of slight stature. Dr. Barrows had a small portion of blood drawn the woman's arm and a culture was made. This was examined by Dr. Buxton, a bacteriologist of Cornell Medical College, and was found to be loaded with the virulent bacteria of septicemia, which are called stereptococci.

The woman now had a temperature of 108 degrees and a pulse of 160. Never in the history of the medical profession was a patient known to recover from this disease with such a rise of pulse and temperature.

Dr. Barrows resolved to try a most radical measure. He injected into one of the large veins of her right arm 500 cubic centimeters of formaline. The effect was almost instantaneous. The woman was at the time almost in a state of collapse. The strength of the solution was 1-5,000.

By the next day the temperature had dropped to 101 degrees with a corresponding drop in the pulse rate. On the succeeding day the temperature went up to 102 degrees and on the next day to 103. A second blood culture disclosed the fact that although stereptococci were still present they were in vastly diminished quantities. Dr. Barrows then made a second injection. The temperature dropped to the normal in a few hours and the pulse to 86 beats per minute.

An examination of a third blood culture showed that no germs existed. The woman's pulse and temperature have now been normal for ten days and she is practically well.

Experiments are being made on animals, and further important results are expected. The injection of formaline into the veins had never been heard of until Dr. Barrows read his paper.—Journal.

The Specific Action of Normal Saline Solution in the Production of Diuresis.

This subject is treated at length in the Medical News for January 3, by Robert Koleman Kempt.

The author asserts that the normal, or rather deci-normal saline solution has a specific action upon the kidney cells, causing diuresis, whether it be administered by infusion, hypodermoclysis or entero clysis.

This result occurs even when such small quantities are used that the mercurial manometer does not show an increase in blood pressure. Also when the renal nerves are severed.

This procedure is invaluable in renal congestion. The author has noted the disappearance of albumen, blood and casts upon its introduction.

These results were manifest in twenty minutes, the time required for absorption.

Double current irrigation is used. (Enteroclysis.) The bed is protected with rubber sheeting and a bed pan is not used, the water being carried off by sheeting to the pail.

From three to twelve gallons are used at a sitting. Irrigations may be given every three or four hours in severe cases. The writer advocates a temperature of 110 F. gradually increased to 120 F.

Work It Backwards.

At one of Dr. Weir's surgical clinics, held recently at the College of Physicians and Surgeons, a woman was presented who had a dislocation of one side of her lower jaw. The history was that the injury had been sustained while she was engaged in strapping a very tightly packed dress-suit case. After reciting this history, Dr. Weir asked a student:

"What method of procedure would you advise to bring about a reduction of the dislocation?"

The answer came promptly: "I would advise her to unstrap the suit case, sir."—Minneapolis Journal.

The Treatment of Influenza and Coughs.

We excerpt the following from the Toledo Medical Compend by David E. Bowman, M.D., Toledo, Ohio, professor of obstetrics, etc., Toledo Medical College: "The elimination of the toxins is too frequently overlooked in these cases. Formerly, in their efforts to relieve the distressing symptoms, the profession have used remedies which produced stomachic disturbances, arrest of secretions, constipation, etc. I find nothing better to overcome the congested condition, in these cases, than two Laxative Antikamnia and Quinine Tablets given every 3 hours. If needed, follow with a Seidlitz powder or other saline draught the next morning, before breakfast. This will hasten peristaltic action and assist in removing, at once, the accumulated fecal matter. Heroin hydrochloride has been so largely used for coughs and respiratory affections that it needs little or no recommendation in this class of cases, but the favorable synergetic action of this drug used with antikamnia, is, I believe, not sufficiently appreciated. Antikamnia and Heroin Tablets will be found useful by every practitioner, particularly during the winter and spring months. The Antikamnia not only adds potency to the respiratory stimulant and expectorant qualities of the heroin, but it prevents the slight nausea which may at times follow its administration alone."

A Remarkable Surgical Operation.

St. Louis, Jan. 19.—A remarkable surgical operation was performed at the St. Louis city hospital last night to save the life of Edward Spilker, aged 19, who had attempted suicide by shooting himself in the left breast. An aperture was made at the wound and between pulsations the wound in the heart was closed with three stitches. A portion of the left lung was also cut away. It is believed the patient will recover.

War on Plague.

Washington, Jan. 19.—Surgeon General Wyman, of the public health and marine hospital service, and the representatives of the health authorities of nineteen states, Indian territory and the District of Columbia, met in conference in Washington, D. C., 19th January, 1903, to consider the subject of bubonic plague in the United States.

Among those attending are Dr. T. L. Kennedy, Iowa, and Dr. H. M. Bracken, Minnesota.

RESOLUTIONS ARE ADOPTED.

Resolutions were adopted: They stated in part:

"The conference will consider the safety of the country sufficiently assured as soon as satisfied that a competent city board of health of San Francisco and a competent state board of health, in co-operation with the United States public health service, will proceed under definite, harmonious and effective laws and ordinances; that they are provided with ample funds, and that they are jointly and severally in the free exercise of their lawful powers."

Your Pulmonary Quartette.

In a complimentary letter to The Maltine Company, a prominent New York physician makes a happy reference to Maltine with Cod Liver Oil, Maltine with Creosote, Maltine with Hypophosphites and Malto-Yerbine. He calls them "Your Pulmonary Quartette."

Timely Remedies.

Lest we forget the importance of guarding digestion in our treatment of coughs which are always present in our work more or less, but particularly so in the fall and winter seasons, it is well to bring to mind the fact that The Maltine Company have furnished to us an excellent combination, Malto-Yerbine.

This is a judicious mingling of Yerba Santa with Maltine. The Yerba Santa is an excellent expectorant, softening the most harsh and rasping cough, stimulating the secretions and favoring resolution upon the part of the inflamed mucous membranes of the air passages. The Maltine assists in the work and serves as a helper of digestion and a nutrient.

And, by the way, in the administration of Creosote, it is well to remember always that The Maltine Company have provided for the profession a very superior combination of Maltine and Beechwood Creosote. It is surprising how much better delicate and, indeed, all stomachs, will bear the pushing of the Creosote when combined with Maltine.—"Medical Mirror."

Clinical Results With Anti-Streptococcus Serum in Scarlet Fever.

By Louis Fischer, M.D., Visiting Physician to the Willard Parker and Riverside Hospitals of New York City.

In 1896 a series of clinical investigations were commenced with Marmorek's serum, by Professor Baginsky, of Berlin. Mild and malignant cases were chosen, and large and small doses were injected. The results, which were published at that time in a paper read before the Berlin Medical Society,[1] were disappointing, and the serum treatment was abandoned by him.

My own experience I owe to the courtesy of Baginsky during the summer of 1896, while abroad, and to continued experience in this city. In a paper read by me[2] before the Section of Pediatrics, New York Academy of Medicine, entitled "Clinical Experience With Antistreptococcus Serum," my conclusions were: "That we are not justified in either using or recommending the use of the antistreptococcus serum, and that the indiscriminate sale of this serum should be prohibited, until clinical experience established the true therapeutic value of the serum."

William H. Park, discussing my paper at that time, said that "the streptococcus serum differs from the antitoxin serum of diphthería in one important feature the bactericidal action of the streptococcus serum. The virulent streptococcus makes no more toxin than one which is not virulent; the inability to grow alone is what makes it virulent. It is, unfortunately, true that the streptococcus serum is still very weak, but it is certainly a protective serum, as has been abundantly proved in the experiments at the laboratory of the health department, where a rabbit has been protected from septicaemia by sufficiently large doses of this serum. If, however, a rabbit become so septicaemic that the streptococcus could be obtained from the blood of the animal, the result of the injection of the serum was negative. It should always be borne in mind that the streptococcus serum cannot be of any value except in inflammation due to the streptococcus."

In a study of 701 cases of scarlet fever, by Professor Baginsky associated with Dr. Sommerfield, the streptococcus was demonstrated in 696 cases.[3]

The streptococcus was found on the pharyngeal mucous membrane, intra vitam.

About 100 cases were studied post mortem, and the streptococcus was found in the various organs in the heart blood, in the bone marrow, and so on. The constant presence of the streptococcus, although associated frequently with other germs, requires careful consideration. Because of this constant presence of a streptococcus its association with scarlet fever might be inferred.

Thus the conclusions of Baginsky and Sommerfield were that the streptococcus is a distinct etiological factor in scarlet fever.[4]

Reasoning by analogy, these investigators determined to produce a powerful serum. The standard adopted was on lines similar to that used in producing concentrated antitoxin for diphtheria.

COLWELL

Dr. Hans Aronson utilized a streptococcus taken from a child with a scarlatinal angina. From this germ he cultivated pure cultures. He also utilized a streptococcus taken from the bone marrow of a child that died of scarlet fever. From the cultivation of these germs Aronson was able to produce a very active and efficient immunizing serum.

A series of preliminary experiments were first tried on animals before Baginsky consented to its use in children. He found that "when mice were injected with a very virulent streptococcus bouillon, which usually 1-100 millionth of a cubic centimeter proves fatal, it was found that they could easily withstand an infection of 0.000015 c.cm. of a most virulent streptococcus bouillon, if they were previously injected with 0.03-0.1 c.cm. of antistrepotoccous serum."

Control mice, which were not previously injected with this new Aronson serum, all died when injected with the same fatal dose of streptococcus bouillon. Mice which were injected with Marmoreck's serum and later received a fatal does of the streptococcus bouillon all succumbed, proving that there was no healing property in Marmoreck's serum.

Aronson used horses to produce immunity. The cultures of streptococci injected by him were derived from cases of scarlet fever.

In Germany, serum of which 0.01 c.c. when injected into mice will prevent septic infection of hog erysipelas is designated as a "normal serum." One c.c. contains one immunizing unit. The serum produced by Aronson, and utilized by Baginsky and myself, is equivalent to twenty times the strength of normal serum.

A series of interesting animal experiments are described in detail by Aronson. After an intraabdominal injection with at least ten times as much as the ordinary fatal streptococcus quantity. The bacteria enter the circulation very rapidly, frequentl y in one hour, but positively after two hours the bacteria can be demonstrated in the blood.

Aronson advises amputating the tail and using the blood oozing therefrom for inoculating the nutrient bouillon. Aronson was able to save most of the animals by injecting zve times the ordinary immunizing dose, two hours after a general infection had taken place. He also reports a series of successful results by injecting this healing serum even twenty-four hours after the infection.

It is interesting to note that in a seris of animals which had first received a fatal injection of streptococcus culture, and on the following day an injection of a curing dose of serum, "living germs could be demonstrated in the blood at least twenty-four hours after such injection of serum." Thus Aronson reasoned that as long as the streptococcus could be demonstrated in the blood of these animals, that curing injections of antistreptococcus serum were indicated.

Aronson maintains in a paperby him that an important therapeutic indication for the use of antistreptococcus serum was apparent to him as long as streptococci could be demonstrated in the blood of animals. He also insists that this point should be used as a guide in the determination of when to use and when to discontinue serum.

How Is the Action of Antistreptococcus Serum Brought About?—Aronson maintains that even very powerful serum has no direct influence on streptococci. He has found that when virulent cultures of bouillon containing streptococci are inoculated into antistreptococcus serum, that they multiply, sot hat, although the serum seems to inhibit the growth of these germs slightly, there is no direct specific destruction which could be attributed to the serum. There is therefore something else in the animal body in addition to the serum, which stimulates cell activity, or probably by the direct cel-

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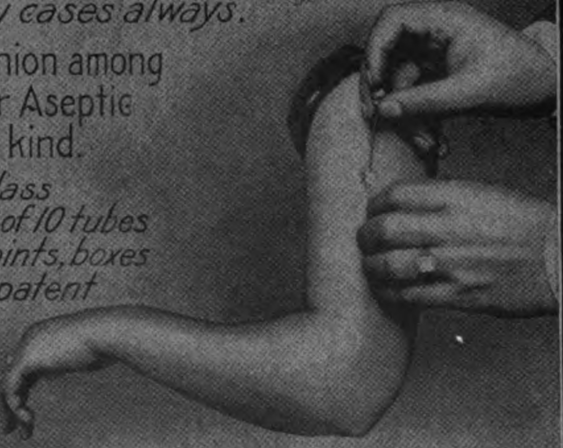

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SERUM THERAPY IN TYPHOID FEVER.

At the Egyptian Medical Congress, held in December, Chantemesse, the French physician who a little over a year ago made such a favorable report regarding the value of anti-typhoid serum in the treatment of typhoid fever, gave further details regarding his work along this line in the hospitals in Paris. This latter report involved the observations and the experiences of this physician from April, 1901, to December, 1902.

Statistics showed at this time that the average mortality from typhoid fever in the hospitals of Paris, omitting those under the direction of Chantemesse, was 19.3 per cent. There were of course variations, but in none of these hospitals was the percentage below twelve per cent.

The low mortality rate of 3.7 per cent was secured in the hospital in charge of Chantemesse, where 186 patients were treated with anti-typhoid serum. Of these 7 deaths (3.7 per cent) in this series three were due to perforation, one to peritonitis, and one to intestinal hemorrhage. These cases were said to have been admitted to the hospital late in the disease.

Chantemesse believes in the early introduction of the serum, even when the diagnosis is not clear. So far 336 patients have received this treatment in Paris, with but 17 deaths. It is claimed for the serum that it is both anti-infectious and anti-toxic. Its most value, believes Chantemesse, is to excite phagocytosis. As a means of prophylaxis it is advised that typhoid fever patients be isolated for the protection of other patients.

By a recent law in France parents are compelled to have their children vaccinated during the first year of life and revaccinated at the age of twenty-one. This is not sufficient to insure the patient against an attack of smallpox, at least in a mild form. For safety, vaccination should be repeated frequently, and so long as there is any disturbance from the operation. This, we think, is the experience of most physicians who have had much to do with the disease, and in their efforts for prevention. If the present proposed law before the Minnesota legislature to repeal the compulsory act of vaccination is passed, and the boards of health and school boards have no power to prevent children from attending school that have not been protected by vaccination, the way will be opened for an epidemic of smallpox that will prove a calamity of the first magnitude. If Germany can stamp the disease out of the army and the country by compulsory vaccination, there is no good reason why other countries should not profit by that example; and it has never been reported that the Germans have suffered in general health by a rigid enforcement of the act; in fact, there is not on the face of the earth, probably, a better average of general health among the people than prevails in Germany.

Corrections.

For March number of Medical Dial. On the cover "Howard University" should read "Harvard University," and the paper on "Phlegmonous Erysipelas" should be credited to Dr. F. E. Walker, of Worthington, Minn. Results of X-Ray treatment should be credited to Medical Record, New York, and the signature to "Clinical Notes" should be C. Friberg, instead of L. Lime.

Air Treatment.

Open air treatment of syphilis is a subject which receives exhaustive attention from Dr. E. H. Douty, Switzerland, in the Medical Record for Jan. 31, 1903. The author advocates the employment of this method in the early stages of syphilis, especially in the first six months. The author claims that his observations lead him to believe that a very large proportion of phthsical patients (30 per cent.) are syphilitic. The author thinks that the open air treatment greatly lessens the severity of the attack and advises that patients suffering from this disease should seek such environments.

A New Treatment for Septicemia.

Whether the injection of Formalin into the system will prove a specific for the treatment of severe cases of septicemia is a question which will probably be decided in the near future. That it is a cure is the belief of Dr. C. C. Barrows, of New York. In reporting a case to the New York Medical Society, Jan. 19, Dr. Barrows said he had used 500c.c. of a (1 to 5000) solution with remarkable success. The case in question was that of a negro woman suffering from blood poisoning following parturition. In spite of local surgical procedures the temperature rose to 107 degrees F. Dr. Barrows made a culture of the blood and found abundant virulent streptococci. After resorting to the injection of the formalin solution the temperature was reduced to 101 degrees F. the next day. At this time a second injection was given and another culture made from the blood with the result of finding the culture free from the virulent organisms.

This report of Dr. Barrows was received with hesitation on the part of the society and provoked considerable discussion. It was the general opinion that further cases corroborating this experience of Dr. Barrows would be necessary before reliance could be placed upon this method.

The New Harvard Medical School Buildings.

Work will be commenced on the new buildings for Harvard Medical School soon. They will occupy a 26-acre lot in the Back Bay Fens. Seven buildings will be erected: five for the Medical School, one for the Dental School, and one for the power house. For these buildings J. P. Morgan pledged $1,135,000; John D. Rockefeller $1,000,000, and Mrs. C. P. Huntington $250,000. Others have contributed liberally and the whole cost is estimated at $4,950,000, which amount is practically raised and in sight. The new buildings are expected to be ready for occupancy in 1904.

Original Articles

A CASE OF TRAUMATIC EPILEPSY.

In Which Operation Was Considered Unjustifiable.

K. Hoegh, M. D.

P. G. 24. Single. Healthy looking young man, without a neuropathic family history, from whom the following family history is elicited.

He had been healthy up to about 8 years of age, when he became subject to attacks of a peculiar sensation in head, a feeling of pressure and a momentary feeling of being bewildered; he does not think he lost consciousness; if he was carrying anything he did not drop it; strangers did not suspect that anything was amiss. A couple of months would elapse between each attack, and they had at first no effect upon his general health. In the course of time they became more severe, so that when he was about 12 years of age he fell down in fits and lost consciousness; but they came on so slowly that he had time to cross a road or get off a load when he felt their approach.

There was at that time no convulsive movements. A few years later, about the time of puberty, there were fully developed epileptic attacks, starting in with a cry; he fell down in convulsions, made chewing movements, in which he frequently bit his tongue. Their frequency was six to eight in every year.

At about 20 years of age he had some fits that consisted in partial loss of consciousness and an impulse to run, which he sometimes did in a straight line; at other times in a circle. These attacks alternated with typical epileptic seizures. The attacks begin with a peculiar sensation in abdomen that spreads to the head, and occupies so much time that he can reach a place of comparative safety. The spasms do not begin in any particular group of muscles, but are said to be general from the start. They are followed by a numbness in extremities that lasts for several days, and which he thinks are slightly more marked on left side; accompanying the numbness is a feeling of formication and bluntness of tactual sense; as the numbness and paresthesia wear away he gets very exhausted and remains so for several days. He thinks that he has lost memory to some extent, especially local memory and power of orientation; that he can not learn names as well as formerly; but he has not observed that he has lost self control or become emotional. Nor has he lost the acuteness of the special senses.

The zymotic system is in normal condition; his sleep is good; he has no headache (except immediately after an attack), nor rachialgianor dedolations; nor has he lost flesh or muscular strength. Upon examination of the body no other anomaly is found than that the right testicle hangs lower than the left. He states in this connection that his mother was left handed. On inspecting the shaved scalp a large depression is found on the left side of its lateral aspect. This is about 4½ centimeters in length and 2 centimeters wide; about 2 centimeters deep. Its direction is backwards and slightly upwards. Its anterior extremity is about 6½ centimeters to the left of and below the sagittal suture, and on a line connecting the external auditory meatus with the center of the line between the bregma and lambda. In its course the depression approaches the sagittal suture somewhat, so that its posterior extremity is a centimeter nearer this line than the anterior, and 6½ centimeters from the external occipital protuberance. The depression is thus behind the motor area, but must be in close proximity to the visual center in the gyrus angulatus and the center of hearing in the spheno-temporal lobe. Both sight and hearing are perfect, as above stated, nor is there any paralysis of the platysma or the mouth, the centers that are nearest the depression in the skull. The area of depression is of the normal color of the skin, and not sensitive to touch or pressure; nor is it anesthetic. Patient states that when he was about 8 years of age he was knocked in the head by the fist of a powerful man; that he is told that he lost consciousness and remained in bed for several days; that there was no rupture of the skin, and that the depression came after this injury.

Upon considering this case the question of operative interference first presents itself. Here we have typical epileptic fits, arising after an injury to the vault of the cranium, which very probably has extended to the cortex. We know that epilepsy in man is frequently connected with cortical lesions, while it at other times comes from the territory behind the pons Varoli, especially the medulla oblongata.

A number of cases are recorded of Jacksonian epilepsy, where operative procedures have produced at least temporary improvement. But our case does not exhibit the features of Jacksonian epilepsy. This form of the disease begins with spasms of a limited group of muscles, gradually spreading to muscles under the control of adjoining motor areas in the brain until the muscles of one side of the body are all involved; then the convulsions spread to the opposite side, first involving those corresponding to those last involved on the primarily affected side and gradually involving more, until finally those are attacked that correspond to those first agitated by the spasm. In this manner the spasms gradually sweep through the whole voluntary muscular system.

Some cases of Jacksonian epilepsy have been benefited by removing pathological products in immediate neighborhood of the motor area of the first involved muscles, and by removing the center itself. This can be explained at least to a certain degree; as the pathogenesis of the epileptic attack is as yet imperfectly understood, we can not say that we have a complete insight in the mechanism of an epileptic convulsion. It is at least conceivable that the pathological metabolism in an epileptic brain has resulted in a condition of exceedingly unstable equilibrium of the molecules in the nerve cells; that the tumbling down of molecules in a motor center may be brought about by a slight disturbance of an adjoining motor cell; that this is communicated to adjoining areas in a constantly widening circle. You may compare the brain in Jacksonian epilepsy to an old fashioned loaded gun, where the pulling of the trigger first explodes the percussion cap with its fulminating mercury, and this concussion communicates the molecular change to the nitre in the gunpowder with its exceedingly unstable chemical composition; the explosion of the gunpowder produces then the discharge of the bullet. No matter how explosive the gunpowder is, as long as no action from without disturbs it, it remains quiescent. In like manner the motor centers are in a condition of unstability, but they remain quiescent until an impulse from without sets them off. As our gun did not go off unless the percussion cap exploded, so the general convulsions do not take place, unless from the katabolism at the primary focus. Clinical experience gives a certain plausibility to this somewhat vague and explanatory suggestion.

But the cases where removal of a pathological product from the cortex outside of the motor area, and where the spasms were not involving one group of muscles after the other in orderly succession, have not been very successful. Where the depression in the skull or some cyst, tumor or degeneration has occupied a certical region outside of the motor area, we find that the spasms do not begin in a limited group of muscles and gradually involve others, but general convulsions begin suddenly, and from the start; in such cases operative interference has been useless.

We cannot offer a sufficient explanation of this fact, but may in this connection call the attention to another fact, which is proved by the now somewhat maligned experiments on animals. While it is possible to produce genuine Jacksonian epilepsy by a mild electrical stimulation of a motor center, it takes a much more powerful irritation to produce epilepsy from insult to the cortex, covering the anterior or posterior part of the hemispheres. Nor are the spasms here like those of the Jacksonian epilepsy, but just like those produced by disease in the human being, that is, they are general from the start. This does not in any way explain the difference in operative results; but proves that the pathological mechanism is different. In this connection we must not forget those very rare cases where epilepsy results from the irritation of a peripheral nerve. Brown Sequard succeeded in producing epilepsy in animals by injuring the great sciatic nerve; its territory of distribution formed an epileptogene zone, that is, a region where irritation produced epileptic attacks.

What the distinguished physiologist succeeded in doing experimentally on animals, accident and disease has sometimes done on men. When a nerve is irritated by pressure, tension or inflammation it happens, although very rarely, that such an epileptogene zone is established, and instances are related, for example, by Bergmann, of cases where individuals with such lesions have become epileptic, and some cures (more or less permanent) are recorded by excising or otherwise modifying such a nerve. In at least some of the recorded cases the spasms began in a limited group of muscles and spread gradually over the whole, as in a true Jacksonian epilepsy. It does not seem that the nerves on the head are more inclined to produce these epileptiform convulsions than those of the extremities.

It is to Horsley that we owe the lesson that we ought to distinguish between the epilepsy produced by irritation of the motor area and that form which follows an injury to other territories of the cortex; he furthermore enunciated the doctrine that we must not be satisfied with nor stop short at elevating a depression, removing a cyst or some other pathological product, but that we must extirpate the psychomotor area that presides over the muscles that first are thrown into convulsions during an epileptic attack. Upon the removal of this cortical area there follows a paralysis of the corresponding muscle groups; this is no more than we should expect. But curiously enough this paralysis has proved to be transitory.

The practice of asepticism in surgery has made us bold in surgical procedures; the mortality of trephining ought in the absence of infection to be very slight if present at all; but that gives us no right to open a skull where there is no good reason for hoping that we by such an operation confer a lasting benefit upon the patient. We certainly expect that the patient will recover from the operation; still we may be mistaken; the patient may succumb to the narcosis; unexpected complications may arise, and we have always a less solid skull, where a smaller or larger piece of bone has been removed, even if we are enabled to close the opening by putting the bone button and the bone chips back in their places. I accentuate that we in spite of the clamor of the patient and his friends have no right to do this. Nor can surgery as an art, not the profession, otherwise than suffer by performing useless operations.

I consequently refused to perform this operation for which the patient was sent to me. I treated him as I would have treated a case of idopathic epilepsy, and the result has been satisfactory.

The argument that the patient under all circumstances is in a hopeless condition as far as his epilepsy is concerned, and that therefore anything that holds out the slightest chance for cure is justifiable, is fully met by the statement that experience has fully proved that operative interference has been ineffectual for good except in cases of genuine Jacksonian epilepsy.

Nor can it be properly contended that unless we try new paths where the old ones do not lead to the desired goal, we shall make no progress if there already is experience for the uselessness of the procedure. That any surgeon has the right to perform a useless operation because the patient desires it or even urges it, is emphatically denied. As members of a learned profession we are in duty bound to give disinterested advice, and he who performs an operation that his judgment condemns as useless degrades the profession and ultimately lowers it in the estimate of the public.

I am pleased to be able to finish the report of this case by the statement that the patient under the continuous use of bromid of strontium has remained free from his epileptic attacks for 15 months, the time of observation.

CHRONIC ABSCESS OF THE NASO-PHARYNX.

By Geo. A. Kohler, Ph. G., M. D., C. M., Minneapolis, Minn.

The infrequency of these cases and the inability to find anything very definite in the literature at my command, has prompted me to report this case.

Mr. B. W. G. consulted me on Sept. 5, 1902, complaining of repeated attacks of sore throat and periodical discharge of pus from the throat at intervals from one week to three months, for the past three years.

History:—Age 27. Diphtheria at 12. Struck by lightning at 24. At 36 felt slightly indisposed; had a moderate fever with slight eruption, which the doctor called measles. Outside of this he enjoyed good health.

Family History:—Father died at 65. Mother living at 62. Nine children in family; seven living. Two sisters died of diphtheria at the time the patient suffered from the same disease as previously stated, at the age of 12.

Examination of the nose showed a moderate hypertrophic condition of the turbinates. Inspection of the throat showed a slight venous congestion over the post-pharyngeal wall below the palate, but a pharyngoscopic examination revealed a thick mass in the vault, which to all appearances resembled an ordinary hypertrophical pharyngeal tonsil with a rather more even surface than commonly found, nothing in sight to indicate the source of the pus. To the probe the mass gave a distinct sense of fluctuation, which led me to suspect its nature. I advised the patient to have the tissue removed, to which he immediately consented.

While cocanizing the tissue I discovered a small amount of pus on the applicator, thus leaving no further doubt as to the nature of the trouble. I immediately made a second examination with the throat mirror, and found the pus oozing from a small opening at almost the extreme upper part of the swelling, and from this concluded that the periodical discharge was due to the cavity filling up, and only when the distention became too great, the pus was forced out at irregular intervals.

After applying the local anesthetic thoroughly I removed the entire mass completely with the aid of a sharp curette, and following the cessation of the hemorrhage I applied a 20 per cent solution of nitrate of silver, which I repeated daily for several days following. The treatment of the nose kept the patient under my immediate observation for about ten days. At the end of this period the throat appeared to be in very good condition, and the patient was temporarily discharged.

On Jan. 15th he returned, not because suffering any further inconvenience himself, but to have his little boy operated for adenoids. He requested me to look at his throat again, which I did, and found the vault to be in excellent condition with a decided improvement of the rest of the throat as well as the nose.

From the last report which I had from him about two weeks ago he has had no recurrence of the trouble.

As previously stated, I have been unable, in the literature at my command, to find anything definite in regard to chronic troubles of this nature, and would be pleased to hear (through the Medical Dial) of any similar experience that would in any way throw light on this subject. Would also be pleased to hear any criticism that my colleagues may kindly offer.

THE HYGIENE OF OUR HOMES.

The interest now manifested in sanitary matters among intelligent people is earnest and well nigh universal. The apparent indifference by the masses to what concerns their general health and welfare has heretofore been the greatest obstacle to progress in preventive medicine. The sewerage of cities has always been a problem for engineers to investigate, and the disposal of filthy deposits a question not easily determined; but so far as a few of the largest cities are concerned definite and successful plans have been introduced, and attention has been directed of late more particularly to the defects of house plumbing and ventilation, and the polution of rivers and lakes from which water supplies are obtained for domestic and general use. In these investigations it is neither new nor strange to find physicians prominent and among the most active of those enlisted in the work. It has ever been thus with the profession when the comfort and safety of their fellow men have been concerned; and it is a fact of promise for good in the future as it has been in the past; but the peculiar relation between their business and their efforts in behalf of preventive medicine (for such is the aim and object of sanitary science), has not escaped notice and comment. At a meeting of the American Public Health Association the governor of the state in his address of welcome made this remark: "To see the most intelligent members of a profession, whose income is derived from fees for curing diseases, assembled to consider with real earnestness the most efficient means of preventing disease is an inspiring spectacle." It might well challenge respect and admiration in contrast with other gatherings of business men, usually assembled and combined to promote their own interests, without regard to the sufferings or pecuniary advantages of their neighbors.

It is the chief intention of these remarks on the above subject to call the attention of physicians to the extraordinary opportunities they have for imparting correct views in practical hygiene in their daily intercourse with the sick and the community in general. Boards of health are necessary, in fact indispensable for the protection of the masses; but they deal with extraordinary circumstances mostly, and act rather by force than moral suasion; they do not often prevent disease, the mischief may be done before their power is invoked or used; but they can control to some extent its duration and limits, and they are useful when a resort must be had to law to produce effects. On the other hand the influence of the physician is constant, and his advice well received, especially in times of sickness and family distress, because appreciated and felt to be offered in sympathy and kindness.

Our subject in its broadest sense includes the location, construction and materials of our dwellings, the water supply, the selection and preparation of our food, the care of our persons and homes and the regulation of labor and recreation.

As to the location of homes in cities there is not always that liberty of choice which should be desirable, but even in cities there is opportunity for wise discretion, with limited means, and in this particular good judgment will lead to satisfactory results. In the country and on farms there is, of course, a wider range to profit by selection of sites for dwellings; but how often do we see all natural sanitary advantages sacrificed and comfort and health largely defeated by the location of the farm house—cattle sheds—pig pens and hen-roosts in close proximity, merely for the convenience of the men folks and to have "things handy," and the negligence with which the premises are often kept, with the various odors, not only annoying to the sight and the sensitive olfactory organs, but liable to carry disease and death on pestilent wings. If the family physician could happen to appear at the right time when the location of the several buildings is under discussion much might be done by a few wise suggestions to insure the comfort and safety of the family; he would not prudently recommend that any stable for farm stock should be located within two hundred feet of the family quarters, and that they should then be managed with great care as to cleanliness.

The cellars are often dangerous as well as useful adjuncts of our houses. They are not always constructed with care and given such attention afterward as to scrupulous cleanliness and ventilation as the health of the families living over them demand. Not many physicians are without the experience of finding on examination closed and musty rooms with decaying wood and vegetables, and frequently stagnant water, even under houses occupied by the most intelligent of our citizens, as well as those of whom little is expected in regard to the observation of sanitary laws of health. If a rattlesnake was known to be in a cellar there would be no rest or peace to that household until the reptile was found and removed; but a poison as deadly as the bite of a rattler may be diffused through all the apartments of the house, unseen and unregarded, except in its effects, if the basement is neglected. In this respect, "Eternal vigilance is the price of safety." And the outside surroundings should not be slighted. A few years ago the inspector of public institutions in Canada issued an order to the superintendents "To keep the rear premises of their buildings and the grounds in as good and clean condition as the front." If such an order could be carried out with our farm houses and the houses in the cities what a contrast to the present should we see in the appearance of all our dwellings, and what an immense amount of sickness and discomfort would be avoided.

In the construction of our houses there is large opportunity to profit by well digested plans and the experience of others. The best arrangement of rooms for the admission of sunlight and proper ventilation are matters mostly of a wise forethought, and the materials—other than wood—which is undoubtedly the best for isolated situations, usually a question of choice. The larger the house and the greater the number of rooms the more complicated and difficult the construction becomes to avoid difficulties in the heating and ventilation, and to secure all the advantages of sunlight, and that cheerful arrangement of apartments so much to be desired, and when accomplished so much appreciated. We have, I fear, been too successful in rigorously excluding sunlight from our houses and persons by window shades, blinds, curtains, plants and clothing of such texture and thickness as to prevent the penetrating good offices of the light and warmth of the sun's rays. Dr. O. W. Holmes said that he was satisfied "man was created for a warm climate or he would have been provided with some natural protection against cold." We may be the victims of the errors of our ancestors in straying into northern regions, and by many generations having the vitality reduced by clothing and other means of protection, thus producing a tuberculous diasthesis, whether from bacilli or something else which now destroys one-sixth of the human race by consumption. Darkness, dampness and cold combined will soon produce tuberculous disease in animals, as proved by experiment.

Water supply. This is one of the most important requisites of a home, and should not only be abundant at all times, but free from suspicion of impurity. In fact, however, it is one about which little care is frequently taken, and less thought apparently than was given the subject five thousand years ago. Then wells were provided and preserved with great care; but now a shallow hole in the ground, in which a scanty supply of impure surface water collects, subject to the ever varying but always present decaying vegetable matter through which it percolates, being also a successful trap for insects, reptiles and sometimes larger game, is the family **well** frequently found on the farms in the newly settled country, and from which the household supply is drawn. When something deeper as a well is found, it is not seldom polluted by the neighboring yards of domestic animals, or by the cesspools of the family and the flowage from sinks and imperfect drainage. In an outbreak of typhoid fever some years ago in a village of Massachusetts, a favorite resort and summer residence of as intelligent a class of persons as our country boasts, the wells were found contaminated by defective sewers and neglected drainage from kitchen sinks, etc. Some abandoned their wells and used only the water from cisterns; but these did not escape the disease and on analyzing the contents of the cisterns human hair and ammonia were found in such abundance as to appear mysterious until it was ascertained that the chamber maids emptied the contents of slop jars on the roofs from which the cisterns derived their supply.

In close connection with the water supply is that of ice, which is now considered a necessity, and enters largely into daily use in many families. It has been supposed, by some, that ice could not be impure; that the process of congelation excluded all deleterious elements, and therefore the source from which it was procured was only a matter of convenience without respect to the quality of the water frozen. This is a fallacy, and the wonder is that any one, aside from some selfish interest, should ever entertain such a delusion. Many years ago the professors of Harvard university proved by experiments, conclusively, "That during the congelation of water its impurities are collected together, concentrated and intensified in the resulting ice." It is therefore imprudent to drink water cooled directly with ice, the source of which is unknown, and may be highly dangerous to health.

In the selection of our food, circumstances may restrict us in variety as well as in that quality which would best serve our wants, or the gratification of moderate and healthy desires; but the proper preparation of such as can be provided is within the control and ability of all individuals of common intelligence who are willing to give the subject due attention; but, under existing circumstances, sanitary science may find much to improve in modern cooking as it is generally practiced. The experience of all physicians will probably agree that in this respect there is an average ignorance that is really cruelty to the race, resulting in a waste of materials and derangement of digestive organs which if habit did not become second nature a large proportion of the human family would be "soon cut off and fly away."

The care of our persons, and the regulation of labor and recreation include so much to be done and avoided that these matters may be found in several excellent works on "Hygiene," and need not be repeated here. As to labor and recreation, we all know there is too much of the former and not enough of the latter, and that the two are not alternated with that judicious regulation which would contribute to the highest welfare of the individuals.

C. K. BARTLETT, M. D.

Medical Miscellany

Health Officer.

We are glad to see the renomination by Gov. Odell of Dr. Albert H. Doty as health officer of the port of New York. Dr. Doty in his long administration has not only received the warmest commendation from the business men of this city, but from a scientific standpoint from the entire medical profession.

Long-Distance Runners.

This subject takes up most of this issue, and includes general observations as to the condition of the runners,, pulse, weight, temperature, condition of the blood, heart, kidneys and physical characteristics. The distance run was about twenty-four miles over a more or less hilly country. The effects seem to have been largely physiologic; pathologic conditions were not noted. So far as known none suffered serious or permanent harm from the race. The heart changes seemed to be physiologic. The article is an interesting study.—Boston Medical and Surgical Journal.

Wireless Telegraphy the Invention of a Physician.

The first private wireless message sent across the English channel was from Marconi, and was addressed to Dr. E. Branly of Paris. It was a message of congratulation on the success of wireless telegraphy, "due in part," it stated, "to the remarkable labors of Dr. Branly." As long ago as 1890 he reported experiments before the Academie des Sciences which established the practicability of telegraphing without wire communication, and the Comptes Rendus of the Academie and of journals devoted to physics contain many reports by him. He is professor of physics at Paris, and the last Gazette Med. de Paris contains his portrait and an interview on the subject of his discoveries, which contain the germ of wireless telegraphy and the opening and closing of an electric circuit at a distance.

Intestinal Obstruction.

The different forms of intestinal obstruction and their non-surgical treatment are described by Harrington. In cases where foreign bodies have been swallowed, he advises against castor oil administration, but to give food that will require bowel evacuation. Examine the rectum frequently, as the foreign body often lodges there. In intussusception he thinks it best to chloroform the child, lay it on its back, and slowly inject one or two gallons of warm water into the rectum. He remarks that the rectum is capable of holding 6 quarts (?). Large enemata should always be tried before advising surgical interference. He thinks the experience with exploratory laparotomy offers little to endorse this short road to knowledge. The article is one that rather repreciates the value of surgery in these cases.—Boston Medical Journal.

Serum for the Cure of Scarlet Fever.

Dr. Baginsky, of Berlin Children's Hospital, gives the results of 12 years' research and experiment in the treatment of scarlet fever with the newly discovered serum. He claims to have established the fact that scarlet fever has a microbic origin known as streptococcus. The germ is one which appears also in erysipelas and occasionally may be encountered in complications with diphtheria. During his 12 years of investigation 701 patients have been subjected to the antistreptococcus serum treatment, with the result that the character of scarlet fever has been definitely established and its germ classified with bacteria. The percentage of deaths has been reduced to such an extent that only eight per cent of scarlet fever patients succumbed. This was far below the percentage of death in the Willard Parker Hospital or in the private practice of physicians in this city.

Infectious Colds.

According to the Hospital, many experiments have been undertaken to satisfy the medical mind that a thing that most people outside our profession have always taken for granted—namely, "colds"—are catching. That they are catching no one now doubts. It is recognized by those who have the management of sanatoria for consumptives that one of the great disadvantages attending the visits of friends is that "colds" are introduced, much to the detriment of the patients. Of course, every lady knows that "sniffy" people are as well avoided when social functions are on hand, and now a serious question is being asked—namely, should a doctor visit his patient when suffering from "cold?" In the ordinary daily life of those who go out into the world and take their chance of all infections, who ride in trains and omnibuses, and even go to church, the opportunities of infection are so many that it is probable that one more is of no moment. But to the chronic invalid, shut off rigorously from external influences, the visit of a catarrhal person may undoubtedly be productive of injurious results. If ever this view should be seriously taken by the public—and they are kittle cattle to shoe, that same public—no one knows what fancy they will take up next. The matter might become a very anxious one, not only for medical men, but for those sick insurance societies which profess to give so much a week to medical men while incapacitated by illness. What is meant by incapacity?

Vegetarian Athletes.

"Is a vegetarian diet proper for those who are to engage in athletic sports?" asks the Revue Scientifique (Lit. Dig.). We must certainly answer in the affirmative if we accept the results of a recent contest in Germany, where the six foremost places were gained by vegetarians. Says the Revue: "The trial consisted in a walking match from Dresden to Berlin, 200 kilometers (124 miles). It was an international championship contest, and the entries included French, English, Russians, Austrians and Americans, besides about twenty Germans. A very severe rule forbade the contestants to stop for sleep, and gave them only one hour for eating. The start was made at 7:45 a. m. Les Inventions Illustrees remarks that the first six arrivals at Berlin were all vegetarians. Karl Mann, the winner, who was twenty-eight years of age, and who has lived on vegetable food for ten years, covered the distance in 26 hours, 53 minutes. He was declared the champion pedestrian of the world.

The Wrong Name.

"The trouble with you," the doctor said after examining the young man, "seems to be that something is the matter with your heart." With my heart!" "Yes, to give it a name, it is angina pectoris—" "You'll have to guess again, doctor," said the young man. "That isn't her name at all."

"A German investigator," says the Scientific American, "has recently discovered an exceedingly valuable and important property of aluminum, which consists in its application as a whetting agent, the effect produced on cutlery set with it being most astonishing. Though a metal, aluminum possesses the structure of a fine stone, has a strong dissolving power, and develops, upon use for honing, an exceedingly fine metal setting substance of greasy feel, while showing great adhesion to steel. The knives, etc., treated with it quickly obtain such a fine razor-like edge that even the best whetstone cannot produce a like result. Thus, knives which had been carefully set on a whetstone, when magnified a thousand times, still exhibited irregularities and roughness in the edge, while the edge of knives sharpened on aluminum, upon exactly the same magnification, appeared as a straight, smooth line."

Hydrophobia in Children.

The doctrine that hydrophobia is a disease of the imagination is refuted with great force by the fact that it occurs both in children and in the lower animals, and that it is rapidly fatal in both. Even if this were not so; the fact that the disease is rapidly fatal in the adult ought to convince even a Philadelphia coroner that it is something more than a disease of the imagination, for diseases of the imagination rarely, if ever, kill. In fact, we do not at this writing recall a single instance. The truth of these facts is painfully brought home by the recent death of the young son of a New York physician from rabies. The case seems to have been an unequivocal one, and the members of the profession everywhere will sympathize deeply with the bereaved father. He has lost his child from an affection which has always been a peculiarly horrifying one, but which modern science has done much to rob of its terrors. It seems that in this particular case the treatment according to the methods of Pasteur was tried but failed. Inoculations from the body of the rabid dog gave prompt results in rabbits. From a case so painful, and so adapted to draw the sympathies of our readers, we have felt it justifiable, in the cause both of science and humanity, to point to the only logical conclusion—a conclusion that seems to require to be illustrated with amazing frequency. That conclusion, of course, is that hydrophobia is not only a disease, but one of the most malignant affections that can assail mankind. And yet in Philadelphia we have a coroner who has abolished hydrophobia by his official fiat!—From Editorial (Philadelphia Medical Journal.)

Paralysis of Children.

Jones criticises the neglect of orthopedic surgery on the part of physicians; there is a tendency to turn their patients over to the instrument makers, and this has been too much the practice in England. He insists on the importance of working on the muscles, stretching and lengthening the flexors in acute infantile paralysis and putting the extensors in such a position that their structural shortening will ensue. We must not confuse muscles which for years have been useless with muscles that are positively paralyzed. The operation of tendon transplantation and arthodesis are also noted in relation to spinal paralysis. The nearest efficient tendon should be employed if sufficiently strong rather than one from a distance, and the selection should be made, if possible, of a re-enforcing muscle the mass of which is parallel to the re-enforced. If the tendon is to be spliced by tendon, it should be done as near its insertion as practicable, to avoid as much as possible a yielding of the paralyzed section, which is apt to occur. If possible to transplant into the periosteum he has found that the best way. The proximal part of the re-enforcing tendon should be fixed into the paralyzed tendon so that it can be maintained as tense as possible, if we are to have it do its work. He describes the operation of arthrodesis, and speaks of its advantages, in flail-like joints. Cerebral paralysis of the spastic type is also discussed at length by Jones, who puts the idiot, the microcephalic, and the violent irritable type of diplegic outside of the class which can be successfully treated. The treatment of any condition short of this may be undertaken with varying success, allowing that it may require a long period. The treatment of the hand and arm in infantile hemiplegia is less promising than the diplegic cases. If the spasm is never relaxed treatment is futile. He speaks particularly of the importance of flexing the elbow superficially, hyper-extending the wrist as the dominant deformities are pronation and carpar flexion. It may be taken as a rule that the fixation of the spastic muscles in a position opposed to their contraction lessens the severity of their spasm. This is perhaps the best explanation of how the good results occur. In the latter period of treatment tenotomy or tendon transplantation may be required, and no opportunity should be lost in proper cases of performing tenotomy. The treatment of spastic paralysis involves operative, mechanical and educational stages. If the surgeon is not satisfied after the case has been under his care for twelve months, he would do best to leave it alone.—American Journal, March 7.

Dr. Robert Maguire, physician to the Brompton Hospital, London, stands very high, both as a physician and bacteriologist. Moreover, he is one of the foremost English authorities on tuberculosis. He has been experimenting with formaldehyde, and he asserts very positively that in it we have a specific for consumption. The remedy must be used hypodermically, and the injection must be made in or about the elbow. It had been demonstrated that a solution representing the strength of one one-hundred-and-seventieth was fatal to the bacillus of phthisis. He employed the agent in this strength with the most astonishing results. He believes this treatment will cure the dread malady in any stage.

Maxime Gogan, the richest citizen along the shores of the Gulf of St. Lawrence, has recently passed away at Cocagne, N. B., at the wonderful age of one hundred and eight years and seven months. His grandfather, Louis Gogan, fought under Montcalm in the defense of Quebec in 1759. He drank for more than sixty years a quart of brandy and a pint of extra dry champagne every day. Until he was eighty years old he could lift a larger load than any man he had ever met. Last April, when he was one hundred and eight years old, he walked to the spring in the rear of his home, and, holding his full weight on his hands and toes, drank from the pool without letting his knees touch the ground.—Medical Times, New York.

The Increase of Pneumonia.

Commissioner of Health Reynolds, of Chicago, in a recent address delivered before the Michigan Board of Health, declared that while the fatalities from consumption were on the decline those from pneumonia were gradually increasing. Dr. Reynolds showed from statistics compiled from reports extending over several years, that pulmonary tuberculosis had decreased from 18.21 per 10,000 of population in 1880 to 14.44 in 1900.

Pneumonia for the same period showed an increase of almost one per 10,000 of population, the death rate in 1900 from this disease being 13.49 per 10,000. Statistics from the federal census for the last twenty years, the whole country over, show a decrease of twenty and three-tenths per cent. in the deaths from pulmonary tuberculosis and an increase of seven and four-tenths per cent of deaths from pneumonia.

Polypoid growths in children are a more common affection than is generally supposed, says L. H. Adler in the January issue of the Pennsylvania Medical Journal. He also contends that these protrusions at the anus are often confused with prolapse. Spontaneous cure results in many cases without having come under the notice of a surgeon. They vary in size from a pea to that of a butternut. Intussusception is a complication which may occur when the growth is high up in the intestines.

There are usually no symptoms attending the polypus located high up in the rectum, but when situated low down in this part of the bowels there is generally a sensation of fullness and distress, and hemorrhage, too, often is of diagnostic importance.

The only conditions simulating this affection are hemorrhoids and prolapse. Careful examination after an enema will eliminate these. The treatment insisted upon by the author is removal.

The author's method is to apply a forceps to the pedicle and another to the body of the polypus and by twisting the latter a separation is accomplished with little pain and hemorrhage. Tearing the polypus is likely to result in bleeding and the clamp and cautery are rather formidable.

Grape-juice and the Typhoid Bacillae.

The Chicago Board of Health after testing the action of various fruit juices on the typhoid bacillæ, state that while lime juice, apple juice and the juice of the grape fruit, all had a more or less inhibiting effect on the growth or action of these bacillæ, bottled grape-juice gave the most conclusive results. The advantage of the grape juice is that while it is as nutritious and generally as easily digestible as milk, one per cent. is sufficient to affect the bacillæ, a quantity so small as not to disturb the feeble digestion.

Antitoxin in Diphtheria.

Kerley, in a paper read before the American Pediatric Society (Archives of Pediatrics, Oct., 1902), lays down the following rules:

1. With a visible membrane inject at once, and take a culture.
2. In croup inject if there is inspiratory and expiratory obstruction.
3. Patients should be seen at twelve-hour intervals.
4. Reinject in twelve hours, unless there is marked improvement.
5. Unless improvement is continuous, reinject at twelve-hour intervals until membrane disappears.
6. Dosage: Two thousand units to a child under one year, amount to be repeated if necessary; to a child over one year three thousand units under same conditions.

The Typhoid Epidemic at Ithaca.

The State Board of Health has been investigating the cause of the outbreak of typhoid fever at Ithaca, and the means of preventing a recurrence. The recently issued bulletin of the Board says that "by what means either of the three small streams furnishing the water supply became infected thus to produce this abrupt, unseasonable outbreak has not been determined to full satisfaction, but, of unusual conditions, there was located upon the ravine-like banks of one a body of foreign laborers during the fall and early winter building a dam, who departed with advent of frost. Among them were probably carriers of typhoid germs, which the first soft weather carried into the stream. A bill has been introduced into the legislature providing for the prevention of pollution of all streams in the State. The measure will give authority to the Health Commissioner to force all municipalities and employees of large bodies of men to dispose of all refuse matter and sewage in such a way as to render the pollution of water supplies impossible. It is estimated that there have been over 500 cases of typhoid fever at Ithaca, but the number of new cases is rapidly decreasing, and it is believed that the epidemic is practically at an end.—Medical Record, New York.

A New Dressing.

Springer (Centralbl. f. Chirugie) applies a thin covering of paraffin over a wound to prevent the possibility of adhesion of the gauze dressings, and has found it admirable for that purpose. It always retains its shape, neither melts nor becomes rancid, and is a good fit without adhering to the wound. A lump of paraffin is boiled in water for about ten minutes and then set in a pan of cold water to cool. When the gelatin has hardened and spread out in a thin layer on the surface of the water, the pan containing the gelatin is set in a pan of warm water until the paraffin is flexible. The sheet of paraffin is then cut and trimmed to the exact shape desired, perforated with a hot needle and transferred to the wound with forceps, the water surface down. The wound can be easily uncovered and cleaned, and it is shielded from all kinds of irritants. The gauze covering remains unimpaired. The light can also penetrate the thin paraffin sheet to exercise a beneficent influence.

Dr. Lucien Lofton, of Belfield-Emporia, Va., has successfully treated seventeen cases of external and internal hemorrhoids with injections of hot decinerneae salt solution, and thinks results as good as with other injections which have been used, and far safer. He uses the water at boiling point, and there is very little pain felt by the patient.

Hypodermoclysis:

Dr. M. Kahn in American Medicine for February 7 reports a case of pneumonia in which the patient had a pulse of 160, a temperature of 105.5, Cheyne-Stokes respiration, pronounced cyanosis, and was apparently moribund. The usual agents had been employed, and further medication seemed useless. Hypodermoclysis was then used, about three pints being given within six hours in four injections. The immediate effect was astonishing; the pulse became slower and of better quality, the temperature dropped, cyanosis disappeared, respiration became regular, consciousness returned and diuresis was marked. Rectal injections of the salt solution were given at intervals for two days following, and the patient recovered. The author of the paper believes that the best safeguard against heart failure in pneumonia is to diminish the toxins, and at present this is best effected by the exhibition of subcutaneous salt injections.

Serum Therapy of Typhoid Fever.

Chantemesse (La Presse Medicale, December 24, 1902) reviews the statistics of the hospitals of Paris, excepting that under his charge, and shows that the average mortality from typhoid fever is 19.3 per cent. The lowest mortality rate was 12 per cent. In the hospital under his own charge, where serum-therapy is resorted to in all cases, there were but 7 deaths in 186 cases (3.7 per cent.). The other treatment employed was the same in all the hospitals. Three of the seven deaths were due to perforation, one to purulent peritonitis, and one to intestinal haemorrhage. All these patients came under treatment late in the disease. Chantemesse has noted no complications in patients coming under treatment early. He considers that it is well to give 2 c.c. of the serum even before the diagnosis is certain. So far, in Paris, 356 patients have received this serum treatment, with but 17 deaths (4.7 per cent.). Chantemesse explains the effect of this serum in that it is both anti-infectious and antitoxic, but above all excites phagocytosis. Thus, it is almost specific in typhoid fever. He also considers the isolation of typhoid fever cases a very important means of prophylaxis. (Phila. Med. Journal, January 24, 1903.)

HOPEFUL CO-OPERATION.

To the Editor of Medical Dial, Minneapolis, Minn.

Dear Sir: At the last (fifty-third) meeting of the American Medical Association, held at Saratoga Springs, June 10-13, 1902, a joint resolution from the Sections of Cutaneous Medicine and Surgery and Hygiene and Sanitary Science was introduced in the House of Delegates as follows.

"Whereas, There is a burning necessity to check the spread of venereal diseases, and, assuming that the States cannot with impunity ignore the condition, it lies in the province of the medical profession to discuss and recommend to the respective State Legislatures and Municipalities means not regulamentative, but social, economic, educative and sanitary in their character, to diminish the danger from venereal diseases. Resolved, That the Section on Cutaneous Medicine and Surgery of the American Medical Association invite the section on Hygiene and Sanitary Science to co-operate with the Section on Cutaneous Medicine and Surgery in bringing about a propaganda in the different States, looking toward a proper recognition of the dangers from venereal diseases, and to arrange for a national meeting under the auspices of the American Medical Association for the prophylaxis of venereal diseases, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year at Brussels, under the authority of the Belgian Government."

This was later submitted to the House of Delegates, which endorsed the action of Section and adopted the following:

"Resolved, that a joint committee of six from the Sections of Hygiene and Sanitary Science and Cutaneous Medicine and Surgery be appointed by the President to stimulate study in, and uniform knowledge of the subject of the prophylaxis of venereal diseases and to present to the American Medical Association a plan for a national meeting, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year in Brussels, under the auspices of the Government of Belgium."

The Committee on Prophylaxis of Venereal Diseases consists of Dr. Henry D. Holton, Chairman, Brattleboro, Vt.; Dr. Ludwig Weiss, Secretary, 77 East 91st St., New York; Dr. George M. Kober, 1600 "T" St., Washington, D. C.; Dr. W. H. Sanders, Montgomery, Ala.; Dr. L. Duncan Bulkley, 531 Madison Ave., New York City; Dr. Frank H. Montgomery, 100 State St., Chicago, Ill.

The peculiar social, racial and political conditions of our country are so different from those on the continent that they necessitate an expression of solely American ideas on this mooted question, both from a socio-economic and sanitary point of view.

The Committee desires the support of the medical profession and the aid and powerful collaboration of the medical press of the country to help them in this work. It takes the liberty of soliciting expressions and views editorially and otherwise, and would be glad of personal correspondence from those supporting the movement and who will contribute by papers, etc., to make it a success in case the house of delegates should favor the holding of such a congress.

By giving this a place in your esteemed paper, the committee feel that you will have aided materially in forwarding the work entrusted to them. I remain with thanks.

Very truly yours,
LUDWIG WEISS, M. D.,
Secretary of Committee.

Perforating Ulcer of the Foot.

A man of 50 years. The ulcer appeared early in the autumn of 1902. The calloused skin was thick and non-sensitive. Recently the ulcer had perforated the dorsum extending from the plantor surface between the fourth and fifth metatarsal bones. The fourth was carious and its distal extremity broken.

Pressure alone is presumably not a sufficient cause to produce perforating ulcer; some suspect a nervous origin, in all probability they act conjointly.

The prognosis is rather unfavorable. The callous on the undersurface was removed and the ulcer thoroughly curetted and swabbed with pure carbolic acid. This was afterwards neutralized by alcohol, and the foot bandaged. The wound is to be dressed with balsam of Peru every other day.

L. LIMA.

Sarcoma of Right Axillary Glands.

The patient, a robust man 43 years old, presenting a soft tumor the size of a fist in his right axillary space. It had existed for three years, but grown markedly for the last year. No other glands were involved, and there was no lencocytosis. The tumor felt somewhat like a multilocular cyst. On cutting into it a soft, lobulated mass protruded, which dissection disclosed to be considerably more extensive than was first assumed. The lobules extended underneath both pectoral muscles, the subscapularis, and the great axillary vessels almost to the coracoid process. It was dissected away en masse. To accomplish this an incision had to be made from the axilla toward the sterno-clavicular articulation and the pectoralis major and minor muscles divided. The axillary vein was much dilated, due to the pressure exerted by the tumor, and great care was exercised in the dissection around this structure. Vessels and nerves coursed through the mass and were cut. Having removed all the tissues involved, the muscles were sutured and the wound closed, leaving a drain of iodoform gauze.

Coley's fluid is later to be used as precautionary means.

The removed glands were very soft, some as large as a goose-egg, others very small.

During the first week subsequent upon the operation much straw-colored fluid was exuding. The patient left the hospital at the end of the second week.

American Urological Association.

This association meets the first Wednesday of each month, except July, August and September.

Annual meetings: The last day of the American Medical Association's meeting and the day following. This year's meeting: New Orleans, May 8th and 9th. President: Ramon Guiteras, M. D. Secretary: Ferd C. Valentine, M. D., 31 West 61st St., New York.

Necrology, Dr. C. M. Skinner.

Dr. C. M. Skinner, who died Saturday evening at Oconomowoc, Wis., just as he was sitting down to a Masonic banquet, was well known in Minneapolis, having resided here for several years. He was for a time proprietor of a drug store at Tenth and Washington avenues S., later at Fifteenth and Washington avenues S., then 1718 Fourth avenue S., and finally at 713 Third avenue S. He was also at one time professor of surgery of the Minneapolis College of Physicians and Surgeons which has since been merged into Hamline university as its medical department. Dr. Skinner was for many years identified with the South Side Gun Club.

The Deaf Shall Hear.

Five patients from the New York institute for the instruction of the deaf and blind attended a performance at the Metropolitan Opera house, March 30, and were enabled to hear perfectly by the aid of the "acousticon," the invention of Miller Reese Hutchinson, of Mobile, Ala. with which the initial experiments were recently made here with success. The appliance is in three pieces. The reverse side of the disc is hollow and filled with gases, the nature of which Mr. Hutchinson alone knows. The ear piece, which resembles that of a telephone, and the vulcanized disc are connected by wires and an electric storage battery that is easily carried in a pocket supplies the current that connects the disc and the ear piece.

The Dietetic and Hygienic Gazette, commenting upon the dietetic value of Iron, says:

"Pathologists have given pointers as to the special condition of the iron in the system and in the circulating medium, and the newer preparations aim to imitate that condition. Most of them have a brief day of fame and then drop out of sight for the reason that they lack some element of eligibility. Few are standing the test of time and the critical ordeal of the clinicians. Foremost among these it is safe to name Gude's Pepto-Mangan. It is probably the nearest approach to a physiologic reproduction yet devised. It deserves its universal popularity, and its manufacturers do well to restrict its sale to strictly ethical channels."

Dr. Acken, of New York, reports twenty-three cases of anaemia in which he exhibited Neoferrum—the new iron, at the West Side Dispensary. His deliberate judgment is that this preparation far surpasses any of the various forms of iron and manganese on the market. Neoferrum, the new iron, is prepared by The Maltine Company, which in itself is evidence that the latest advances in medicine, chemistry and pharmacy have been utilized.

Little By Little.

Little by little the time goes by—
Short if you sing through it, long if you
sigh;
Little by little—an hour, a day,
Gone with the years that have vanished
away;
Little by little the race is run,
Trouble and waiting, and toil are done!

Little by little the skies grow clear;
Little by little the sun comes near;
Little by little the days smile out
Gladder and brighter on pain and doubt;
Little by little the seed we sow
Into a beautiful yield will grow.

Little by little the world grows strong,
Fighting the battle of right and wrong;
Little by little the wrong gives way,
Little by little the right has sway;
Little by little all longing souls
Struggle up nearer the shining goals!

Little by little the good in men
Blossoms to beauty for human ken;
Little by little the angels see
Prophecies better of good to be;
Little by little the God of all
Lifts the world nearer his pleasing call.
—Ex.

Clinical Notes.

Dr. Sweetser brought three instructive and interesting cases before the medical class of Hamline University. The first one was interesting from the fact that a diagnosis of malignancy had been made, and the patient was much worried.

A hard irregular lump, about the size of a hazel-nut, could be felt in the floor of the mouth to the right of the median line. Complicating the case was a large swelling in the region of the submaxillary gland on the same side. Dr. Sweetser pronounced it salivary calculus, basing his diagnosis on (a) mobility of mass in the mouth, (b) noninfiltration of floor of the mouth, (c) creamy pus exuding from the orifice of Wharton's duct, (d) the marked increase of swelling in submaxillary region during ingestion of food with a subsequent decrease, (e) age of patient, (f) rapidity with which growth attained its present size.

An incision was made over the calculus which was shelled out and found to contain a kernel of wheat. Dr. Sweetser thought it advisable also to remove the submaxillary gland, because of the liability to stenosis of the duct with continued swelling of the gland which might lead the patient to believe that the "cancer" had not been removed—at any rate, the removal would cause no inconvenience to the patient. Cutting down over the swelling and nicking the fascia, the gland protruded and was shelled out by the handle of the scalpel, the duct and bleeding vessels ligated, and the wound closed.

BOOK NOTICES.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition, by Prof. Carl von Noorden, Senior Physician to the City Hospital, in Frankfort, M. Authorized American edition, translated under the direction of Boardman Reed, M. D., Prof. of Diseases of the Gastro-Intestinal Traçt, Hygiene and Climatology, Department of Medicine, Temple College, Philadelphia.—New York, E. B. Treat & Co.

Part I.

Obesity. The Indication for Reduction Cures. Price 50 cents.

For many years the works of Von Noorden have been familiar to German readers in the form of short essays published in medical periodicals and in his larger works, notably, Textbook on the Pathology of Metabolism, Berlin, 1893; Diabetes and its Treatment, Berlin, 1st edition 1893, 3rd edition, 1901. The object of the present series of monographs is to present in a collected form the results of the increasing experience of the author and his assistants in the pathology and therapy of the disorders of metabolism and nutrition. These little volumes appear in a neat and attractive form which the reader can enjoy while sitting in his easy chair and which he can peruse at one sitting.

Part II.

On the Treatment of Acute Nephritis and Chronic Atrophic Kidney.

Part III.

On Colitis.

The other numbers are expected to appear at intervals of four to six months and the following themes are under consideration: The Medical Treatment of Diabetes Mellitus; Indications for and the Methods of Carrying Out Feeding(Mast.) Cures; The

Technique of Reduction Cures; The Significance of Aceton in Diabetes Mellitus.

Obstetrics. A textbook for the use of students and practitioners by J. Withridge Williams, Prof. of Obstetrics, John Hopkins University; Obstetrician in Chief to the Johns Hopkins Hospital; Gynecologist to the Union Protestant Infirmary, Baltimore, Md. D. Appleton & Co.

This work is comprehensive, clear and practical. The opening chapters deal with the anatomy and physiology of the generative tract and while they are well adapted as a guide to the student in the laboratory work, they are just what the practitioner requires to refresh his memory and keep him abreast with the times. The section on Obstetric Surgery is so admirably illustrated that the operator must feel that his every difficulty has been anticipated.

The work is well written and profusely illustrated.

On the much discussed operation of Symphyscotomy the author takes a decided stand in which we entirely agree with him. He says, "On comparing the results following Symphyscotomy and Caesarean section in the same class of cases it would appear that little can be said in favor of the former. In the first place, the maternal mortality following it equals, if it does not exceed that following Caesarean section, while the foetal mortality is considerably greater, being 9 or 10 per cent in the former and practically nothing in the latter operation. Moreover, if an error is made in estimating the relative size of the head and pelvis, the child is inevitably lost with symphyscotomy, while such an error is of no consequence when Caesarean section is done. Furthermore there is no comparison as regards convalescence following the two operations. After the former the patient requires prolonged rest in bed in an uncomfortable position, whereas after the latter she recovers in a short time and with but slight inconvenience." The apparent simplicity of the operation of Symphyscotomy has been an attraction to many practitioners; we would advise them to read pages 414 and 415 of Dr. Williams' book.

We congratulate the author and the publishers on the presentation to the profession of a work which is bound to attain to a high position in medical literature.

A Tried and Valued Friend.

One of the leading practitioners in Nebraska writes: "My experience with Maltine dates over fifteen years, and I have found it a tried and valued friend. In the large group of diseases where malnutrition is a most conspicuous feature, Maltine Plain or combined is the sine qua non of treatment.

"I cannot speak too highly of Maltine with Cod Liver Oil. Your vacuum process prevents rancidity and removes the odor and taste of the oil, which, with its reliability, make it the peer of any oil preparation on the market."

Every function of the body is controlled by the nervous system, hence, just to the extent of the nerve lesion, will there be a depression of the vital forces. The experience of the profession proves that one of the best possible remedies for this condition is Celerina, in teaspoonful doses, four or five times a day. No one, after an intelligent use of Celerina, will deny its power to give renewed energy to the whole nervous system.

Honor for Hamline Medical College.

Dr. Thomas Devereaux, a graduate of Hamline Medical College in the class of 1901, who spent a year as interne in the Minneapolis City Hospital, is now in Washington, D. C., as assistant U. S. army surgeon. During the competitive examination for the position, out of sixty examined only three passed, one from the University of Pennsylvania, one from a New York school, and Dr. Devereaux, of Hamline, who stood at the head of the list. The most prominent medical schools of the country were represented in these examinations.

Sufferers from cramp, Popular Science says, will find instant relief by this simple method: When attacked by the malady, turn up the toes (ankle motion) as far as possible. This draws up the muscles of both the calf and thigh and relief comes at once. Many bathers at seashore resorts have followed this instruction with satisfactory results.

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Rec'd MAY 28 1903

MEDICAL DIAL

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Acetozone is very readily decomposed, and especial precaution must be exercised to prevent deterioration. Do not place in vicinity of a steam-pipe, radiator, or other heated object. If heated to boiling point of water an explosion may result. Avoid contact with moisture except when dispensed. In making solutions of Acetozone, alcohol, glycerin and other organic substances should not be employed.
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Editorial.

The legislature of 1903 has adjourned, and without making any special change in the statutes concerning the medical men of the regular profession. The anti-vaccination bill, after passing one branch, failed in the other, and thus what would have proved, if it had passed, a backward step, if not a calamity in the state, was avoided. The osteopaths received their recognition as a profession, as their bill was passed providing for a state board of examiners, five in number, who are to examine and licence applicants to practice osteopathy in this state. It will be the duty of this board to protect the community from ignorant pretenders, and to license only those of the best grade in their vocation.

Typhoid Fever.

It is no secret that both St. Paul and Minneapolis are suffering from an epidemic of typhoid fever to an unusual extent. The hospitals in Minneapolis are full, and St. Paul has made application for room here. The form of the disease is severe and several deaths have occurred.

The Northwestern hospital of Minneapolis has admitted eighteen cases within two months, and the city hospital admitted eighteen in March, and nine cases in the first fourteen days of April. The water supply is blamed for this outbreak.. It is hoped that the experiment of electrocuting the bacteria in the water, an account of which we publish in this issue, may prove successful; and if the reservoirs can be thus treated and purified in bulk of poisonous germs, a filtering plant (by many thought to be of doubtful utility) will be unnecessary.

Since the abatement of Typhoid at the Cornell University, probably for want of new material, the Sanford University in California is suffering with the same disease in an epidemic form.

Paresis.

Dr. T. F. Clouston, the distinguished superintendent of the Morningside asylum for insane in Scotland, reports this fatal form of brain disease, with mental symptoms, as certainly increasing. He says, "The malady may be described as a breakdown of the great center of the mind and motion in the brain; it always goes on from bad to worse, till it renders its victim utterlessly helpless in mind and body, and kills him in a few years. No cure, and scarcely any mitigation of this latter-day curse has yet been devised. It is a disease of cities, of restless lives, of active brains in their prime; sometimes of dissipation and debauchery, or life at high pressure, commonly." During the past year the asylums of Scotland received 150 new cases; those of England, 1,400, and those of Ireland, 52. The hospital statistics of this country show as large if not larger number. Among 659 admissions at Ogdensburg, New York, there were 31 cases of the disease, over four per cent. In 1890, in the state of New York, the per cent. of admissions was estimated at three per cent., and statistics will prove the disease on the increase in that proportion.

While the cities furnish the largest number of paretics, the number reported for the whole state of New York would probably represent very nearly the average for the whole country. The direct causes are, stimulating liquors and rich food, great competition in business, excessive study and prolonged brain work, loss of sleep and other forms of physical and mental exhaustion by dissipation, and a disregard of the hygienic laws of health. To prevent this waste of vitality there must be a return to a more moderate manner of study and work, more exercise in the open air for professional and closely confined business men, more diversion for those in the most exacting duties of life; more sleep and less stimulants and highly stimulating food.

The X-ray and the Finsen Light in the Treatment of Lupus.

In the New York Medical Record of April 11th, 1903, Dr. A. D. Rockwell has a paper on the above subject, in which he compares each light as to its curative effects, and the danger of harm to the tissues. The actinic rays are the most benign in the treatment of malignant or tuberculous skin affections, which is a manifest advantage. The Dr. says, "It is true that light radience, like its fellow, the x-ray, causes both chemical changes and fluorescence, as well as dermatitis, and pigmentation, but the dermatitis, the result of light, is soon produced and undergoes rapid resolution, while the x-ray burns are both slower to develop and far slower to heal." But the curative effects of the x-ray in skin diseases are more rapid than in those of light, both curing the same diseases.

Dr. Rockwell reports a case of lupus vulgaris of the chest of long standing in which the Finsen light had been used with partial success. The benefits were observed up to the fifteenth treatment; but no further improvement was made with thirty exposures; two weeks later treatment by x-rays proved most satisfactory, ending in recovery after some forty-five exposures administered during four months. The question is raised whether these two lights may not prove beneficial alternately, or when either fails the other might might not be successful? The Dr. has found also idiosyncrasies in individuals, where one kind of light produced a burning and itching which made it impossible to continue the x-ray, while the Finsen light had no such effect and greatly benefited the patient.

The Veto on Osteopathy, by the Governor of Utah.

We understand Gov. Van Sant has not yet signed the bill passed by the late legislature of Minnesota in favor of the osteopaths, and his attention is called to the following veto of the Gov. of Utah.—(Editor of Dial.)

Since writing the above, Gov. Van Sant has signed the Osteopathic bill, which we very much regret. We still believe that his attention should be called to Gov. Well's message, on account of its able presentation of facts, which should interest everyone having the safety of the public at heart.

Veto of Osteopath Bill by Governor Heber M. Wells, of Utah, March 16, 1903.

To the Senate:

I herewith return without my approval Senate Bill No. 131, entitled "An Act declaring the practice of osteopathy not to be the practice of medicine and surgery within the meaning of title 52, revised statutes of Utah, 1898, and regulating the practice of osteopathy in the State of Utah."

The saving of human life, whether by means of looking to the prevention of disease or by means calculated to cure disease already established, will be admitted without question to be the proper climax of professional ambition as well as the highest humanitarian desire of legislative enactment. In both these directions the state of Utah, by vigorous sanitary laws and by strict requirements as to the quality of medical practitioners, stands well in the forefront of enlightened and progressive commonwealths.

Only through conviction should we venture to weaken in any degree these safeguards which experience and observation have proven to be beneficent and satisfactory.

Practice of Medicine.

Whatever the term or nature of the tenets of the particular school which this bill aims to recognize, its practice must, it seems to me, be considered a branch of the science of medicine. After all, the physician of whatever school or designation, has to deal with the same physiology, the same conditions, the same laws of cause and effect in health and disease. All practitioners may not have the same knowledge and the same skill, yet our statutes have wisely provided as a matter of public policy and protection, that a certain amount of skilled knowledge all of them must have.

It requires considerable honesty in any practitioner to admit that a case in hand is beyond his powers. His training may be limited, his pretentions modest; but the consequences of his weakness in refusing to concede it are equally dangerous. The natural treatment of any physical disorder is necessarily determined by a diagnosis of a case—a preliminary of first and absolute importance. To do the wrong thing by performing dangerous manipulations, or to do nothing at all—either of which courses is easily open to the unskilled—may be equally fatal. The peril is not lessened if the physician, perhaps by happy accident or coincidence, has discovered the true condition.

Human Life Precious.

He may be manly enough to confess inability to suggest proper remedies, or reckless enough to attempt treatment of his own altogether without reason or applicability, or indifferent enough, as already suggested, to do nothing at all. In either case the patient suffers the risk. Is not human life too precious to be thus trifled with?

The foregoing suggests that the treatment of disease should not be permitted to be a matter of mere experiment; and inasmuch as the authority to practice presupposed an acquaintance with the science as recognized by all the regular schools, any knowledge short of that should be deemed insufficient. I consider it unfair and dangerous, therefore, to allow the adherents of osteopathy or of any other school to practice without undergoing the ordinary tests to which other practitioners have to submit. The specialist may go so far as his talents and inclination may carry him, and the public be benefited by his advancement, but the fundamental and essential knowledge which every physician ought to have can not safely be waived or ignored.

Safeguards Swept Away.

Science is progressive; advancement can not be stayed, in the art of healing least of all; and the dogmatism of disputants, whether in medicine or anything else, must soon yield to the light of truth and reason. Whatever merit osteopathy may have will assuredly find recognition. The present contention is that in the bill before me the necessary requirements and safeguards with which the law surrounds the physically afflicted are thrown down and swept away. To this I am unwilling to consent. No practitioner of this school who possesses the qualifications required of the practitioners of other schools needs such a law. I deem it unwise to enact it for the benefit of those who have not those qualifications. Whenever all who seek to engage in the healing art shall be equally recognized as competent under the regulations now generally established, one medical law will be sufficient. This condition complied with it would give me sincere pleasure to name as a member of our state board of medical examiners an adherent of the very school in whose behalf this piece of legislation is proposed.

Heber M. Wells, Governor.

Later.—Governor Van Sant signed the bill and appointed the board of examiners.

Merit and Reliabilty With Consequent Success.

We are advised that our old friend, "The Antikamnia Chemical Company," for many years located at No. 1723 Olive st., St. Louis, Mo., has moved into its new home, Nos. 1622-1624-1626 Pine St., in said city. The new laboratory is fully equipped with all the latest chemical appliances and machinery, which afford increased and needed capacity for the manufacture of the well-known and reliable Antikamnia preparations. The company's sales during 1902 were the largest in the history of the business, and that the demand for their products is constantly growing is demonstrated by the fact that the first three months of this year show a pronounced increase in sales, over that of the corresponding months of last year. In fact, it is the growth of the business which necessitated the removal into larger quarters, where the company has 75 per cent more space than in its old plant. The steadily growing esteem in which the Antikamnia Chemical Company's products are held by the medical profession throughout the world is due to the well-known merits of the original Antikamnia Tablets and Powder, as well as to the undoubted remedial efficacy and pharmaceutical excellence of the new combination tablets which this company has, from time to time, added to its line of specialties.

Original Articles

ECLAMPSIA.

E. H. McIntyre, M. D., Minneapolis.

The etiology of eclampsia has for years been unsettled. The striking clinical manifestations, its remarkable course and the high rate of mortality, has stimulated obstetricians to seek its cause. The history of experimental research and investigation along this line, reveals a chaotic condition in the extreme. The result then, of half a century's work, has been the building of numerous theories, some of which, meeting death instantly, others born to flourish a short time, while still others remain awaiting substantial confirmation.

Modern medical teaching discredits the theory of albuminuria, once believed in by Levin and Simpson. It assigns to the presence of albumen in the urine of the eclamptic, no primary etiological significance, but insists that it is concomitant or an effect. It is known that albuminuria is not a constant condition accompañying eclampsia, and that there are many cases on record where albumen has been present before labor and the case escape eclamptic seizures. It has further been demonstrated that in fatal cases there was not always kidney lesions. Some die in a comatose state, and yet the albumen has never been more than a trace. Traube and Rosenstein's theory, giving as a causal factor, hydremia, oedema and aenemia of the brain has been disproved, it being easily shown that they are but casually related to eclampsia. The "pressure" theory has also been displaced by modern writers. If such a condition were causative, there would be shown at times at least post mortem evidences of hydronephrosis, which have not been recorded. A similar group of symptoms would attend the pressure effects of tumors, if this theory were tenable.

The diminished amount of urea accompanying eclamptics led many to believe uremia—retention of the urea as the cause. It is impossible to identify uremia and eclampsia. Uremics die without eclamptic symptoms, and eclamptics, when examined post mortem, are without pathological signs of uremia. Different authors and investigators have sought the field of bacteriology to find a solution of the cause of this condition. Delore, Doleris, Gerdes, Blanc and Favore have made bacteriological studies, isolating organisms supposed to produce eclamptic convulsions. Bar criticises the microbian theory with logic. Bacteria are found not only in the urine of eclamptic patients, but in pregnant women who are well. The injection of such urine into animals produces but little results. Staphylococcus and Pneumococcus have been isolated in the blood serum of eclamptics. It is demonstrated that these with the colon bacillus produce liver and kidney lesion, but there is no proof that any one germ produces eclampsia (Bar). Fehling, before the Halle Medical Union, in 1899, denounced the theory as without sufficient proof. Prof. W. Stroganoff, (Congress of Obstetricians and Gynecologists, 1900), says eclampsia is of microbic origin. He sets forth several reasons in support of his position. (1). That it is a disease affecting the parenchymatous organs. (2). That it is an acute infectious disease, commencing explosively or after certain prodromes. (3). The fever that accompanies it occasionally, especially the post mortem elevation, is peculiar to an infectious disease. (4). An attack confers immunity. (5). The marked genus epidemicus that has occurred now and then. (6). It is impossible to explain the increase of eclampsia in populous centres otherwise than by accepting the theory of its infective character. Stroganoff thinks it is an air-born contagion which usually penetrates into the organism through the air passage.

The germ is very slightly virulent, men and children are not susceptible to it, nor are women at any other time of life except puerperium. It finds favorable soil in the foetus, male or female, and is very resistant, and in hospitals, retains its virulence about three weeks. The period of incubation is three to twenty-four hours. Primiparae, women bearing twins and women with renal troubles, are most susceptible. Mascord is in favor of this theory. He has observed the occurrence of the disease in animals and from this substantiates the baciliary theory. Bar declares this parallelism between eclampsia and infective diseases is misleading and reports bacteriological examinations of urine, viscera and blood of both mother and child with negative results.

Lange of Kronesberg, believing in a disturbed metabolism, points to the thyroid gland as an index to the condition. He collected 133 cases of pregnant women, in which thyroid enlargment occurred in all but 25, and three of these were doubtful. In 18 cases with no thyroid enlargement, there was the "kidney of pregnancy" and albumen. Six of these cases terminated in eclampsia and in four others there were severe headaches and other premonitory symptoms of eclampsia. To test the hypothesis, let us suppose that the toxine poured into the blood causes a hypertrophy of the gland (pregnancy goitre). Thyroidin is now developed in large quantities. The thyroid is a regulator of metabolism and its secretion is hostile to the internal product (eclampsia poison or poisons) and destroys or neutralizes it. In this case the poisons causing eclampsia would be subdued and the pregnancy would run a physiological course and exhibit a minimum of the usual disorders. Assume again that the physiological enlargement does not occur (as in the 18 cases reported by Lange). The internal product imperfectly neutralized by deficient quantity of thyroidin, circulates through the system—a toxemia being the result. The kidneys and the liver, unable to cope with the forces, are overcome and the patient sinks into the eclamptic state. Pregnancy goitre usually occurs at about the sixth or seventh month, thus it may be of some diagnostic value, its absence indicating a disturbed metabolism, and anticipating a possible eclamptic seizure.

Modern views regarding the etiology of eclampsia are almost unanimous in their support of the toxemic theory. While a particular poison has not been isolated, nevertheless, accumulated facts regarding the condition seem to point to this source for a solution. Fultz, Ritter and Blouchard think that the poison is leukomain, and that it is elaborated by internal metabolism.

while Chrobak, Potter, Byers and Krollman, not committing themselves as to character of the poison, claim that it is of foetal origin. These latter observers say that the size of the uterus is not a factor, but the fact that the symptoms practically subside when the child dies in utero, or is removed, lends strength to the proposition of the foetal origin of the toxic substance.

Merletti shows that ammonium carbonate in solution causes eclampsia and ultimately death in animals, and further states that post mortem examinations in these animals showed lesions often found in eclamptics. Merletti's studies led him to declare the condition one of profound toxemia caused by the excess of incomplete urea. Rochford has found what he thinks is the etiological factor in two toxic substances, paraxanthin and heterexanthin. When these were injected into mice and guinea pigs, symptoms not unlike eclampsia were produced. Bouffle de Saint Blaise calls attention to the importance of the liver in the etiology of eclampsia. He thus supports the French theory along with Lubarsch. Z. Weifel upholds Schmorl's idea that eclampsia is due to a coagulating ferment circulating in the blood and acting upon the nerve centers. He attaches such a significance to post mortem findings in the lungs, liver and brain where multiple thrombosis was demonstrated by him. He further maintains that the experiments of Chamberlent are conclusive evidence of the correctness of his position. Knapp, of Prague, considers that the symptom-complex is esentially that of intoxication. He points out the similarity of strychnine poisoning with eclampsia as strengthening the toxemic theory. Porak identifies himself with the auto-intoxication theory, but differs from others in regard to the source of the toxic substance. He ascribes to the absorption of toxines from the intestinal canal the important role, and wishes to impress the significance of constipation as an etiological factor. Charles B. Reed, in reviewing the conditions, favors the supposition that eclampsia is a toxemia in which the placenta and uterus alone are the sources of the disturbance. He attacks the foetal origin theory, claiming that while the gases where the foetus was in utero are substantiating, still it did not explain the cases of eclampsia which occurred post-partum.

Tarnier has demonstrated that under normal conditions a certain amount of fatty degeneration of liver cells is present during pregnancy, and is shown that capillary dilitation and the formation of necrotic patches occur in eclampsia. From the present of acetone in large quantities, it is suggested that there is present an abnormal decomposition of organized products, or an imperfect elimination of the non-nitrogenous products of retrograde metamorphosis due to fatty degeneration of the liver cells where their activity is over-burdened by the increase of biliary salts from the foetus.

From the further decomposition of these retained carbo-hydrate products, convulsive poisons and acetone are developed, and at the same time, from the faulty action of the liver not completely changing waste matter (nitrogenous) into urea, bodies would be produced which irritate and inflame the kidneys and cause further renal insufficiency That the bile acids in the foetal meconium are probably a factor in the production of eclampsia is strongly supported by the fact that after the death of the foetus albumen of pregnancy ceases. Davis, of Philadelphia, thinks experimenters were for a time misled by the fact that during eclampsia the urine injected into animals is but feebly, if at all, toxic, while on the contrary the urine of healthy individuals is often highly toxic to animals. When, however, the blood serum of eclamptics was carefully studied and a microscopical study of the organs of the eclamptic patients showed, as demonstrated by Winkel, multiple emboli, it became evident that the toxines of eclampsia caused convulsions because they are absent from the urine and excretions, and are present in the serum of blood and in the organs of the body. A. W. Johnson sanctions the toxemic theory, but calls atention forcibly to the probability of the disease being due to the composite effects of different substances. Added to this is a nervous predisposition, deficient renal capacities and an irritable uterus. He thinks the latter often acts as an exciting cause, which is shown by the fact that the convulsions are often ushered in by uterine contractions, as well as by the fact that the emptying of the uterus causes a cessation of symptoms.

The pathology of eclampsia presents a varied picture. Recent investigations in this field, while not being markedly extensive, have in any event not resulted in the establishment of definite lesions characteristic of eclampsia. So many and varied are the possible and causative factors of each lesion, that little light is thrown upon the subject of the etiology. In recent literature, we find the names of Winkel, Schmorl, Klebs, Prutz, Lundfors, Sundberg and Merletti intimately associated with the pathology. Winkel reports nine cases (Virchow Archiv. 98). He divides the findings under two heads. One group comprised those in which the kidneys showed simply an acute exacerbation of an old chronic process, and the other class included those in which the kidneys showed signs of acute nephritis. In the first there were six cases, in the second two. Only once were the severe necrotic changes in the liver found, which Schmorl found constantly. These necrotic changes in the liver have had various causes attributed to them. Klebs says they are caused by pressure of the strong muscular contraction of the abdominal wall against the liver during convulsive attacks. In these cases thrombi are found in the vessels, which lead to hemorrhage and subsequent necrosis. Schmorl says they are due to products of decomposition of the placental tissues or toxines arising from placental disease. Winkel, in his report, affirms that these lesions are not constant findings and therefore canot be specific of eclampsia. The liver cell emboli found in the heart, lungs and brain are not alone characteristic, but are found in any injury of the liver where necrosis results. In some of Winkel's cases, he discovered hemorrhagic foci in the brain, and he thinks these are due to arterial pressure and apoplexy.

The only condition present in every one of his cases was the kidney lesion referred to above. Prutz has collected 500 cases from literature. In 368 cases only seven healthy kidneys were found. Congenital malformations of the urinary apparatus did not exceed the normal. Dilitation of the ureters was found in only 37 cases. In 213 cases the liver showed changes, usually hemorrhagic and necrotic areas. Prutz suggests as a cause, capillary toxic thrombi. Rupture of the capsule of the liver and hemorrhage into peritoneal cavity were found in four cases. He also found liver cell emboli, but thinks they are of minor importance.

The cases of eclampsia with icterus (25 out of 267) could not be separated. Broncho pneumonia and hemorrhages were frequent. In the spleen, pancreas and adrenals were found thrombi, hemorrhages and infarcts. Prutz does not believe in the bacterial origin of the disease and wishes to impress what his pathological findings seem to indicate —that the etiology and pathology are not constant.

Two cases in which careful examinations were made by Lundfors and Sundberg, showed besides the degenerative changes usually found in the kidneys, necrotic and hemorrhagic foci in the spleen and liver. Microscopical examination showed in one case in the blood of the right heart numerous emboli of the liver cells and a few large multinuclear cells of syncytial appearance, similar emboli were seen in the arteries and capillaries of the lungs. In the second case, the picture was practically the same, but the multinuclear cells of the syncytial appearance were absent. Bacteriological examination of the blood and uterus showed proteus, bacterium coli and floruescent microbes.

Merletti points out that hemorrhage occurred only after the convulsion, the predisposing cause being a degenerative process in the tissue near the central vein and probably an alteration of the endothelium of the blood vessel due to prolonged action of the poisons in the circulation and to an increase of arterial pressure during the convulsions. Further experiment established the fact that unless ureters were tied, an excess of ammonium carbonate did not produce convulsions, the mechanical obstruction and the total elimination of the urine being important factors. These results seem to indicate that the hemorrhages and necrotic foci in different organs were secondary to the intoxication and that the usual clinical and pathological results could be brought about by this toxemia. This point brings us back to the original opinion of clinicians, i. e., if the kidneys retain perfect functions, this toxemia does not occur.

Amglade and Poux conducting a post mortem on an eclamptic, pay particular attention to cortical changes. These findings are: (1). Alteration of pyramidal cells surrounded by abnormal cellular elements. The alteration of the pyramidal cells were of two kinds: (a), disappearance of the chromatic granules (nissl) corresponding evidently to an exhaustion of the cell and marked deformation or distortion of the cell. (2) The small cellular elements are increased and the pyramidal cells are surrounded by round and deeply colored cells. They showed nothing abnormal except an increase in number. (3) In addition to these, there were other cells, round or oval in appearance, and less strongly stained and possessed of a distinct outline and with granular contents. One or two large granules represent the nuclei of these cells. They are found only in the cortex of those dying of convulsive attacks and it is a question whether they are leukocytes which have emigrated from the vessels or whether they are enlarged protoplasmic glia cells of the type described by Andriezen, Lugars seems to incline to the latter view. Frauben (May '99) examined two cases of eclamptics post mortem. Specks of blood were seen under the serous coat and in deeper parts of the liver. The microscope showed that each speck represented an aenemic area and a hyperemic area with necrotic patches. These liver changes, Frauben insists, were quite secondary, being due to the effects of the convulsions acting mechanically. The alleged embolic deposits of placental cells in the liver were always secondary.

The findings of investigators unite in the production of a varied pathological picture.

The treatment of eclampsia naturally resolves itself into (a) careful prophalaxis and (b) measures adapted to cure the active conditions. The first is absolutely essential in the management of every case of pregnancy. It may be, and has been, the means of averting terible calamities. The treatment of the incipient stage presupposes a recognition of all those symptoms which are likely to precede the attack. The general lassitude of the patient, constant and irregular headaches, high arterial tension, with a rapid pulse, and intestinal disturbances, combine in presenting an unmistakable picture. And in addition to this, if the physician has made repeated urinary examinations, there will come from this source, points of diagnostic value. Quantitative and qualitative examinations of the urine are necessary. Albuminuria, deficiency in the total amount of urea excreted and oliguria, must arouse the suspicions of the physician. Many clinicians regard urea as the best index to tissue metabolism and of special value as a guide in eclampsia. The estimation of the toxicity of the urine is important. A low toxic power of the urine is a dangerous sign and indicates increased toxicity of the blood and body tissues. This is Blouchard's idea and is supported by recent experiments. The presence of albuminuria is of undisputed value in diagnosis, as it is shown to precede convulsions in about 90 per cent of the cases. Bar and others lay stress upon the significance of oliguria. These are the preliminary features of the disease. It is manifest that large ingesta of nitrogenous foods and substances rich in potassium, sluggish liver and defective elimination, furnish a favorable condition for the production of a toxemia. To meet this state of affairs, it is necessary to stimulate vigorously the excretory and metabolic processes and attempt to diminish the formation of these poisons.

Out door exercise and fresh air are beneficial, and the employment of laxatives, diuretics and frequent bathing, are agents which will accomplish great good. The diet should be light, and milk should constitute it almost wholly. In more serious cases, the patient should be kept in bed and eliminative and dietetic measures adopted as noted above.

When, in spite of these simple hygienic and medical measures, the symptoms persist and the case appears to approach the eclamptic stage, it is advisable to induce labor. It is quite generally conceded that while the operative measures may in itself precipitate convulsions, still, the proceeding is logical when it is remembered that convulsions are inevitably the rule and that the postponement of obstetric interference only results in the patient growing less able to stand the consequences. Charle's statistics show that this method is preferable and is more liable to terminate favorably.

When the convulsions come on (eclamptic stage) efforts should be directed to control them. Chloroform, morphine, veratrum viride and chloral are used for this purpose. W. W. Potter objects to veratrum viride, claiming that it is a dangerous remedy, if pushed to the extent necessary to control convulsions. Dr. John Gordon, in a late paper, praises it and wishes to impress its value when the arterial tension is high and a rigid os uteri is present.

Hoid, reviewing the therapeutic agents, gives morphine no place in the remedial list, especially in cases of oliguria and non-albuminous conditions.

Stroganoff, who believes in the infective character of eclampsia, publishes remarkable statistics showing results at the "Midwives' Institute." He claims no mortality in the treatment of 45 cases with oxygen during convulsive attacks and hypodermic injections of morphine immediately afterward. Chloral was given per rectum and milk, brandy and saline solutions constituted the balance of his treatment. Stroganoff objects to chloroform on the ground that in its administration the inhalation of oxygen is prevented.

Pepper praises veratrum viride and condemns pilocarpine. Jardine, McIlwrath and Porak believe in the efficiency of saline infusions. Jardine used the salt solution with bromides and chloral, and reports one death in 22 cases under his treatment.

Attention must also be directed towords emptying the uterus. Most writers believe this to be judicious. A reduction of mortality from between 25 and 30 per cent to 6 or 8 per cent and the immediate cessation of symptoms, seem to argue strongly in its favor. Moreover, expectant and palliative treatment is almost sure to result disastrously.

The different measures to accomplish the evacuation of the uterus are (a) Ceasarian section, (b) mechanical dilitation of the cervix, (c) incisions in the cervix and (d) a combination of the two latter. Caesarian section is generally condemned. It carries with it a high rate of mortality, 36 per cent (Charpentier). Hellman has collected 40 cases. Of these, 21 mothers and 23 children recovered. The mechanical dilitation of the cervix is the most popular method. Jewett sometimes prefers this method in combination with cervical incision, but he advises full dilitation of the cervix before proceeding to extricate the foetus. Galbausen believes in forced delivery after less radical measures fail. He uses forceps and has observed dilitation to begin when they were introduced. Bassi also advises forceps.

While the convulsions are being overpowered and the uterus is being evacuated, it should not be forgotten that radical measures are to be adopted, calculated to rid the system of the toxines and prevent their formation.

Croton oil and jallap cause rapid intestinal evacuation and their use is imperative. Duretics, dry and wet cuppings and the application of fomentations, are further important details. De Lee and Bouton are recent writers advocating vigorous venesection in desperate cases.

This, then, forms a digest of modern ideas regarding the management of eclampsia. Definite and exact knowledge of the etiology of the condition is essential before a more scientific treatment can be suggested.

Davis, of Philadelphia, believes that the time is near when we will have a reliable test by examining the blood serum, and that an anti-toxin will be added to our resources.

A CASE OF POST-OPERATIVE TETANUS WITH ESPECIAL REFERENCE TO THE FOCUS OF INFECTION.

By Dr. L. J. Hammond.

The case is that a female of 22 years of age, the daughter of a farmer, whose duties in addition to household work included milking cows, feeding pigs and attending to chickens. Previous to her arrival in Philadelphia she had suffered from an attack of(gonorrheal) peritonitis. Three days after her arrival in the city, the patient complained of toothache and swelling in the left cheek, due to 11 carious teeth. This attack terminated in an alveolar abscess, which was incised and cleansed of a considerable quantity of pus. Two days after this head had healed, an abdominal section was done for a bilateral pyosalpinx, ovarian abscess on one side and a multiple cystic ovary upon the other. The abscess sacs were removed without rupture. The patient progressed very well, until the sixth day, when she complained of strange feelings about the eyes. Four hours later she complained of an intensity of this ocular condition with stiffness of the jaws. Dr. Hammond saw her within an hour after the latter was noted, and found the patient presenting a risus sardonicus. The abdominal incision was examined and found united without any irritation. Trismus grew rapidly worse and in five hours after he saw her it was impossible to separate the jaws, and at the end of two more hours the muscles of the neck were all completely spastic. No other muscles were spastic until about four hours previous to death (which occurred 27 hours after the first symptoms were noted), when there was noticeable contraction of the muscles of the back and abdomen during the paroxysm only. Morphia, eserine, bromides, chloral and the tetanus antitoxin were all employed. Owing to the tightly closed mouth a culture could not be obtained from the teeth cavities, hence a positive bacteriological proof of tetanus could not be obtained, but the knowledge of the habitat of the tetanus bacillus and the mode of life of this farmer girl, would tend to convince one that she had become infected with tetanus germ at her home, and that the extensive caries of the teeth should furnish a most vulnerable storehouse for its concealment. As the period of incubation of tetanus is nine to twenty-one days, the germ could not have been introduced at the time of operation.

Discussion.

Dr. Joseph Sailer: Some years ago during a course in bacteriology at the Pasteur Institute, I was much impressed by a remark made by Roux upon the treatment of tetanus by antitoxic serum, that there were two classes of cases; the chronic, all of which recovered, and the acute, none of which recovered.

When Dr. Hammond asked me to see this case he had given a million units of the antitoxic serum, and I felt that there was really very little more to be done. My experience is that Roux's remark about recovery is pretty nearly true; that is to say, chronic cases recover rapidly under any treatment, and other cases, no matter how early the treatment is instituted or how vigorously carried out, die inevitably. Of course, the most important thing one can do under these circumstances is to arrive at some conclusion in the early stages as to whether there is any likelihood that a case will get well. There is an old rule regarding tetanus, that if the symptoms commence in the upper part of the body, particularly in the head, the prognosis is grave. If they commence in the lower part of the body the prognosis is very much more favorable. It is easy to theorize why this should be so. If the lesion is in the lower part of the body the toxin reaches the less vital centers of the spinal cord and there is a progressive although very slow immunization of the nervous system so that by the time it reaches the upper portion the nerve cells are able to resist injurious influences. So far as I know there is no evidence that such a theory has any actual basis of truth.

Of course, the question of the treatment of tetanus is a most alluring one. The antitoxin is such a trustworthy antidote to the tetanus toxin that Ehrlich and Morgenroth could work out their theories of immunity with mathematical values, which is difficult with antitoxins of many other organisms. It would seem, therefore, that if there is any disease in which antitoxin ought to be efficient, it is this one of tetanus. Yet, excepting in the cases of some of the smaller animals whose bodies can be thoroughly saturated with antitoxin, even experimentally it has no curative power, for the reason that the toxins are united with the cells by intermediary bodies and form combinations that cannot be neutralized by the antitoxins as the toxins in the blood are neutralized by the antitoxin of diphtheria.

In regard to Dr. Hammond's case, when I saw it, the symptoms were most pronounced in the face and the entire appearance of the patient formed a most typical clinical picture. Even at that time I was compelled much against my will to look upon the prognosis as hopeless, because the patient was beginning to have cramp of the respiratory muscles. The sensation of a band around the chest is a characteristic symptom, and almost the gravest met with in traumatic tetanus, and indicates that the fatal outcome cannot be long delayed. The tetanus bacillus stays in the original wound without multiplying, and liberates a toxin that travels along the nerve sheaths to the parts of the central nervous system from which the influences which move special muscles arise. As the peripheral neurons are the parts first affected they appear suspect some other focus of infection to be also the parts in which the symptoms are first manifested. The fact that this patient's symptoms began in the eye and extended to the face led me to than the abdominal wound, and it seems probable that there was infection in the jaw. Cultures would not have been of much value. A few investigators have been able to obtain the tetanus bacillus from the original wound. In one case the bacillus was said to have been obtained from the neighboring lymph glands, but the majority of observers, no matter how carefully investigations were undertaken, have been unable to find it and for pretty obvious reasons. It does not multiply. It appears in small numbers, and usually is a rather difficult germ to grow.

It is hardly worth while to mention that there is probably no germ more difficult to destroy than the tetanus bacillus. It is more difficult than the anthrax because it is anaerobic and it fails to grow in the intervals of fractional sterilization, unless put under anaerobic conditions. The spores can be boiled for 24 hours without being destroyed. A few instances of aerobic tetanus bacilli have been described. I think if methods could be adopted by which the tetanus bacilli could be killed all further measures would be unnecessary, because no other organism can resist the condition required to destroy it. I have been interested in the gelatine treatment of hemorrhage. In going over the literature it is surprising to find how frequently patients injected with gelatine for checking hemorrhage have died of tetanus. Some five or six cases are now on record. The reason is that the tetanus bacillus in gelatine media cannot always be gotten rid of by boiling at intervals.

I can only agree with Dr. Hammond in his idea of the case that it was an infection probably carried with the patient from her home and lodged in the tooth. I should be rather inclined to differ with him in his view that the depressed state of the patient had promoted the infection. I should rather think that perhaps the latent focus had been aroused by the suppuration in the jaw, or even by the operation upon it.

Dr. F. C. Hammond: Coe, of New York, in 1901, reported two cases of tetanus following aseptic celiotomy. One case was similar to the case reported by Dr. Hammond as regards the pelvic condition, bilateral pyosalpinx (gonorrheal). In this case tetanus developed during the latter part of the third week. The patient had progressed so well from the operation that she was permitted to lie upon a couch on the 16th day. On the 24th day, while around the ward, her legs "gave way," precipitating her to the floor. For a few days previous there had been some difficulty in swallowing and stiffness of the muscles of the neck. Owing to her known hysterical nature, these were considered of a hysterical character. Subsequently sufficient symptoms developed to warrant a diagnosis of tetanus. The patient died on the 36th day after the operation, and the 20th after the appearance of the initial symptoms. In the second case, stiffness of the muscles appeared on the 9th day, and the patient felt inclined to be hysterical. A diagnosis of hysteria was made. On the next day marked tetanic symptoms appeared and the patient succumbed on the 11th day after the operation. In both cases an early diagnosis of hysteria was made, which was verified by a consultant. The diagnosis of tetanus was not made in either case until trismus had developed. It hardly seems possible in the modern day of aseptic and antiseptic surgery that we should look for tetanus as a complication of abdominal section.

Dr. H. D. Beyea: I would like to ask Dr. Hammond to what extent, and how the water used in this operation was sterilized. In a plastic operation, cervix and perineum, performed by Dr. Penrose in a private house a few years ago, tetanus developed and resulted in death. The nurse in attendance, not accustomed to prepare for such an operation, it was found had not properly prepared the water. It had been taken from a well after a storm and was muddy. This was observed when it was too late to resterilize the water, and therefore mercuric chloride was added. There seemed to be no question of doubt but that the water was the source of infection in this case. Shortly afterward there occurred at the University Maternity two or three cases of tetanus with the same result. It was discovered that the water used for douching was taken from the tap and prepared by adding mercuric chloride. The infection here was positively traced to the water. It would seem to me that since the tetanus bacillus is so frequently found in water, that unless the water is sterilized by fractional sterilization, boiled for at least two hours on two consecutive days, or sterilized in the Sprague-Schuyler sterilizer under fifteen pounds pressure, we should look to the water as the probable source of infection. Aside from catgut it is practically the only source of infection in abdominal technique.

Dr. B. C. Hirst: The cases that occurred in the University Maternity were three in number and all due to the water of intrauterine douches, I am sure. We had at that time a resident physician who conceived the idea that every woman's womb must be washed out after labor. Every unfortunate woman had an intrauterine douche whether there were any complications or not, and three died of tetanus. We had the water examined after the first case, and in the sediment collected from the tap water there were demonstrated the bacilli of malignant edema and of tetanus. Animals injected with the bacilli died, some of malignant edema and some of tetanus. We had boiled the water, but we immediately installed a Sprague-Schuyler sterilizer, the first, I believe, in the University Hospital.

It is a curious fact that the mistake should be made so often of mistaking tetanus for hysteria. I have seen three cases in which this mistake was made at different times, in different localities and each by a different consultant.

Dr. Hammond closes: I thank the gentlemen very much for the discussion which has amounted to so much more than the paper that I have learned a great deal from what I felt to be a very uninteresting subject.

I took advantage of the suggestion made by Dr. Sailer as to the prevention of any subsequent cases of tetanus by first cleansing the entire institution with 1-500 bichloride solution and liberated two tanks of oxygen in each room with the hope that pure air might contribute something toward preventing such condition. I never before had a case of tetanus, and have not had since. In the same week there were four major operations in the same institution, and the water that was used was first filtered and then boiled 18 minutes. So, it seems to me improbable that the infection was in the water. If so, we would have heard something more from it in the other cases, all of whom were prepared in precisely the same way both as regards the water and the instruments. The case directed itself so clearly toward the teeth as the focus that I have learned the lesson that whenever I have a patient from the country districts the first thing I expect to do, and for which I shall accuse myself of negligence if I do not do, is to inspect the teeth, having any carious teeth looked after before operation. In answer to Dr. Beyea's question, I can but repeat that it seems highly improbable that the germ was in the water. I do not think in this case that there was any possibility of mistaking the diagnosis for that of hysteria. Hysteria never entered my mind. The lectures I heard when a student so impressed me, especially in regard to the peculiar expression (risus sardonicus) that from the appearance of this in my patient I felt no doubt as to the diagnosis.

BIRTH PALSIES.

By Dr. M. H. Bochroch.

The obstetrician does not always take into consideration the accidents to the child which so frequently eventuate in serious and permanent palsies. These injuries are not always evident at birth; very frequently they do not receive attention until years after, and then at the hands of a neurologist whose function is usually limited to making the diagnosis of a permanent and hopeless lesion. Birth palsies occur more frequently in the practice of the general practitioner than in the hospitals and wards attended by professional obstetricians. In brain lesions, such as hemiplegias, microcephaly, porencephaly and hydrocephalus, forceps are as a rule used too late rather than too soon; that prolonged pressure such as occurs in primiparae, is more often the cause of this deplorable state than the improper use of the forceps. In cases of cerebral hemiplegia or cerebral diplegia the most that can be accomplished is a tedious and only partially successful attempt at education, and some training of the paralyzed limbs. It would seem that if in every child in whom at birth, there are present symptoms of asphyxiation following distochia and in whom there has been prolonged pressure and constriction of the head, it would be a justifiable procedure to rapidly make an opening of moderate size upon either side of the parietal region; by such a procedure the effused blood escapes, or could be washed out with a normal salt solution. Erb's palsy is detailed, stress being laid upon the avoidance of the various procedures which predispose to this condition. The treatment of brachial palsy resolves itself into the employment of massage and electricity. The paralyzed arm should not be allowed to hang helplessly by the side, but should be supported in a sling or in a velpeau bandage. In some of these cases nerve suturing may be indicated.

Discussion.

Dr. George M. Boyd: I have been fortunate enough not to meet with any of the palsies seen as the result of difficult forceps operation. I have never met with a case of brachial palsy. The doctor speaks of prolonged labor superinducing the palsies rather than the labor assisted by forceps interference. It seems to me that very many of the injuries that we meet with, and possibly the greater number of asphyxias and foetal deaths are due to too early interference, injudicious or faulty use of the forceps.

Dr. Stricker Coles: I have been so unfortunate as to have one case of palsy of the arm in difficult labor. The shoulders were very difficult to deliver and twenty minutes were used in making traction. I thought at one time I would not be able to deliver them at all. It was a typical case of palsy as described by Dr. Bochroch. I heard occasionally from the child, and at one time I heard that she was at the Polyclinic Hospital, where it was thought to make an x-ray picture, thinking the palsy was due to displacement. This was refused, and at last I heard of the patient was that she had diptheria and died.

The only other form I have known of is facial paralysis occipito-posterior delivery with forceps. The paralysis disappeared in five or six days and I have seen no bad results following the paralysis.

Dr. L. J. Hammond: I have been very much interested in the surgical treatment of peripheral nerve injuries and my feeling is that in this unfortunate condition we have a lesion justifying surgical treatment. As Dr. Bochroch has said we have the condition due either to extravasation of blood from rupture of the venous plexus, which surrounds the cord (extra-durally) or we have inflammatory lymph deposited within the sheath itself. If this be correct it seems to me that we have in operation a relief that should be undertaken in cases that do not respond to the routine medical treatment within a reasonable period. If operation is delayed until nutritive changes take place it is probable that nothing can be done.

I would like to hear from Dr. Bochroch regarding results of treatment.

Dr. W. S. Stewart: I would like to call the attention of the Society to another form of palsy which we might find on investigation. I presume that most of the members of this society do not believe in maternal impressions. I have had in my experience a case resembling that described by the reader of the paper, but which I could trace back to maternal impressions. The child's left arm was paralyzed and hung at its side. The mother was disposed to accuse me of injuring it in her delivery. Professor D. Hayes Agnew was consulted and said that there was nothing to indicate that the child had been injured in delivery. I inquired of the mother whether she had been disturbed in any manner by seeing a person with a similar condition. She at first said no. Then she replied except that a man had sat opposite her at her table who had no use of one arm. I told her I believed that to be the cause of the child's condition, and that it would be well to try electricity. I did not believe the condition would ever improve. That child, unfortunately, did not die, as in the case mentioned, and is living today with the same condition unhelped by various treatments and numerous doctors. I had another case which occurred with a woman sitting opposite a man at their meals with a glass eye. When her child was born it had a corresponding sightless eye. In another case a pregnant mother gave birth to a child that had constant movements similar to chorea, and I learned that the mother while carrying the child was riding in a street car with a woman whose child was choreic. I could give you many other cases without doubt results of maternal impressions. While this society may not feel much interest in this subject, I think it is often well to trace back such occurrences to the true source.

Dr. E. P. Bernardy: There is no doubt that a prolonged labor can cause serious brain lesions to the new born child, the excessive overlapping of the parietal bones causing rupture of the blood vessels and injuring the delicate coverings of the brain, but the true cause of many brain lesions, especially those of late appearance, are caused mostly by the injuries caused by misapplied forceps. While the forceps are all saving both to mother and child, it is a well known fact that they can become the reverse.

In an experience of nearly five thousand confinements, I can hardly recall a case injured by prolonged labor, where forceps were not applied. In my earlier obstetrical practice the application of forceps was one in about five cases. At the present it is one in about fifty or a hundred confinements.

In an article which I published on the "Use and Abuse of the Obstetrical Forceps," the statistics showed that in America the forceps was applied in every fifteen confinements, therefore I cannot believe that these injuries are produced from lack of the use of the forceps.

Dr. F. C. Hammond: Regarding Duchenne's paralysis, the experiments of Stolper conclusively prove that the plexus cannot be compressed by the tips of the forceps so long as the child presents by the vertex, although it may occur in face and brow presentations. Dr. F. X. Dercum states that he has never seen a case of palsy cerebral in origin occur in multipara. From the standpoint of prophylaxis it would be well to apply forceps, just so soon as the fetal head fails to recede between pains.

Dr. Bochroch closes: Regarding F. C. Hammond's remarks, I cannot go into details concerning in what particular presentation the forceps do the most damage. It is well to remember Erb's point high up on the neck, the site of the origin of brachial palsy, and that if the forceps lay over too far palsies may be made in that way. In some literature it is shown that the sole cause of palsies is that the forceps are put on in a bungling fashion, pressing on Erb's point. It is a very curious fact that facial palsies usually disappear in two or three days. I mentioned in my paper that nerve suturing might be resorted to. I am not, however, familiar with a case in which it has been done. Nerve suturing is receiving considerable attention from the surgeons, and they will have to decide that question.

I think that Dr. Bernardy did not understand me; I tried to make clear that it was the want of proper use of the forceps rather than the early use which caused the injuries. The fact that the forceps are not used early enough and prolonged pressure permitted, especially in primiparae, is, I think, the frequent cause of the palsies encountered.

Reviews.

Book Notices.

THE SURGICAL DISEASES OF THE GENITO-URINARY ORGANS, by E. L. Keyes, A. M., M. D., LL. D., Consulting Surgeon to the Bellevue and the Skin and Cancer Hospital; Surgeon to St. Elizabeth Hospital; formerly Professor of Genito-Urinary Surgery, Syphilology and Dermatology at the Bellevue Hospital Medical College, etc., and E. L. Keyes, Jr., A. B., M. D., Ph. D., Lecturer on Genito-Urinary Surgery, New York Polyclinic Medical School and Hospital; Surgeon to the Out-Patient Department, St. Vincent Hospital; Physician to the General Clinic, Out-Patient Dept. of the House of Relief of the New York Hospital, etc. **A Revision of Van Buren's and Keyes' Text-Book.** With one hundred and seventy-four illustrations in the Text and Ten Plates, eight of which are colored. New York and London. D. Appleton & Company, 1903.

This work is practically the third edition of Van Buren and Keyes' Text-Book of Genito-Urinary and Venereal Diseases, first published in 1874. In the present edition syphilis has been entirely eliminated, since it is a genital disease only in its method of approach, not at all in its manner of expression.

The ripe experience of its senior author would naturally lead us to expect a thoroughly digested work, and in this the reader will not be disappointed. The whole subject of genito-urinary surgery is dealt with in a masterly manner, and we know of no safer guide in this specialty than the work before us. The book is admirably illustrated and the reading matter is up to date.

PROPHYLAXIS—PERSONAL HYGIENE — CIVIC HYGIENE — CARE OF THE SICK. By Joseph McFarland, M. D., rPofessor of Chemistry in the Woman's Medical College, Philadelphia; Albert Abrams, A. M., M. D. (University of Heidelberg), formerly Professor of Pathology, Cooper Medical College, San Francisco; and W. Wayne Babcock, M. D., Lecturer on Pathology and Bacteriology, Medico-Chirurgical College, Philadelphia. Volume five of "System of Physiologic Therapeutics, edited by Solomon Solis Cohen, A. M., M. D. Published by P. Blackiston's Son & Co., 1012 Walnut St., Philadelphia, Pa., 1903.

The above work is an important part of the System of Physiological Therapeutics, and has been well prepared by the authors. It is really a condensed history of natural medicine.

The opening chapter on "Health and Its Defenses" gives a clear and concise definition of medical terms, and outlines in a comprehensive manner the relation of nosology to prophylaxis.

In the chapter on the "Intrinsic Factors of Disease," a table from a report of Billings as to the proportion of sick and defectives at different periods of age between the sexes is given, and it may be a surprise to some to learn that males suffer from one-third to double that of females in this respect; exposure, accidents, unhealthy employments and environments, and dissipation, are given as causes for this disproportion against the males.

The chapter on "Parasites, Poisons, Bacteria," etc., with excellent illustrations, are full, and the explanations very complete; in fact, in these particulars it would seem that nothing is left of value unsaid.

The remarks on roof-gardens are good suggestions, and they show how much is lost to the inhabitants of our cities of comfort by not utilizing more the roofs of their dwellings in hot weather, and especially in the evenings. Even at a moderate elevation they are comparatively free from the dust and noises on the surface; the ancients understood these conditions and passed much of their leisure on the housetops.

There is also a warning as to the location of health department offices in public buildings. All sorts of contagious diseases are liable to come in contact with other attendants in the public places of business, and visitors and parties on other business should not be subjected to such unnecessary exposures to their comfort and health.

We can cheerfully recommend the whole work to the profession as interesting, able and reliable.

Silver Nitrate Injections in the Treatment of Pulmonary Consumption.

In the Philadelphia Medical Journal of March 14th, 1903, Dr. Thomas J. Mays publishes a paper on the above subject that is a second announcement concerning this special treatment by injections of nitrate of silver, and a result of the collected investigation of physicians that he had invited to give their experience in the treatment. The following analysis of the gross results of the fifty-five cases reported in response to the doctor's first appeal are given:

An analysis of the gross results of the cases recorded shows the following:

Whole number of cases reported, 55.

Number arrested, 11 (20 per cent).

Number improved, 22 (40 per cent).

Number not improved, 7 (13 per cent).

Number died, 15 (27 per cent).

Gain in weight of 24, total number whose weight is recorded, 259 pounds.

Average gain, 10 pounds.

Whole number of incipient cases, 15.

Number of these arrested, 7.

Number of these improved, 8.

Number of these died, 0.

Gain of 7, all whose weight is given, 88 pounds.

Average gain, 12 pounds.

Whole number of advanced cases, 22.

Number of these arrested, 5.

Number of these improved, 10.

Number of these not improved, 4.

Number of these died, 3.

Gain of 11, all whose weight is given, 139 pounds.

Average gain, 12 pounds.

Whole number of far advanced cases, 18.

Number of these arrested, 0.

Number of these improved, 4.

Number of these not improved, 2.

Number of these died, 12.

Gain of 5, all whose weight is given, 33 pounds.

Average gain, 7 pounds.

To sum up results of the experiences of the different physicians that had given the treatment a trial, it appears that cough was relieved, vomiting, when present, abated, night-sweats favorably influenced, general strength improved, and there was a gain in weight.

The following are Dr. Mays' conclusions:

"Taking a general survey of the above collection of cases, and the therapeutic results which have been obtained through them, I think it is plainly evident that the silver nitrate injections possess a decided antagonism to the pathological and complex process which we know as pulmonary consumption. It must be borne in mind, however, that in forming an estimate of the action of a new remedy it is comparatively easy to overrate its virtues and to ignore the efficacy of other influences that enhance its final effects. But making due allowance for all such weaknesses, we have in this collection a confirmation of the results* which were obtained by myself with the silver injections employed in a large number of cases more than four years ago, differing from mine in the fact that they are more forcible, because they emanate from a number of independent observers in whom the personal equation was entirely eliminated. In conclusion, I trust that this research into the clinical action of silver nitrate in the treatment of phthisis will merely be an entering wedge into this inviting field of therapeutics and will induce many others to take up the work and develop its possibilities.

***Directions:** Select for injection a point immediately over, or slightly behind, the pulsating carotid artery in the neck, between the angle of the jaw and the clavicle. Lift the skin between the thumb and forefinger of the left hand and puncture only immediately through the skin. Inject five minims of a 2½ per cent solution of cocaine hydrochlorate, detach the syringe from the needle and let the latter remain in the puncture. Wash out the syringe with water, draw a 2½ per cent solution of silver nitrate into the syringe, attach the latter to the needle and throw in 5 minims of same. Or if cocaine nitrate can be secured mix 6 grs. of this and 6 grs. of silver nitrate with half an ounce of water and inject 10 minims. This is a preferable method, but as yet there is very little cocaine nitrate on the market. As a rule, most of the injections should be given on the side below which the affected lung is located.

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For The Medical Dial.

A few years ago an elderly gentleman, a minister, called on me for some of Mrs. Winslow's Soothing Syrup. As the druggist had none, I told him I did not know the recipe for making it. He insisted on my making him some quieting medicine for his little baby, as it cried all the time and would not be comforted. I inquired of him about the case, and found the sufferer was a very young child which was being fed cow's milk from a bottle. I told him he needed no medicine, but that all that was necessary was to feed the baby rightly; to put a little water and sugar into the milk and not give it too much nor too little. The man went away very indignant; but as he could not get any medicine he had the good sense to follow the advice given, as I learned several weeks after, when he came running across the street to shake hands with me and inform me that he thanked me very much for that medicine I had given him. "But I never gave you any medicine," I said. "That's it," said he: "I went home and fed him like you say, and he git well, he grow. It vas the best medicine vot I never got before."

T. J. CATLIN, M. D.

Delano, April 22, 1903.

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MEDICAL DIAL

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Editorial.

DR. LORENZ'S VISIT.

The Famous Surgeon Is Expected to Be in Minneapolis This Month.

That Dr. Lorenz, the great orthopedic surgeon, will visit Minneapolis this month is practically assured. His plans provide for a visit to Milwaukee, June 13, and he is expected to arrive in this city about June 16.

While here the famous doctor will visit the various hospitals and operate on malformed hips for the instruction of such Minneapolis physicians as may wish to see his methods exemplified.

Graduates of the Medical Department of the Hamline University.

The twentieth annual class-night exercises of the Hamline College of Physicians and Surgeons was held June 1, at the Hennepin Avenue M. E. church. Rev. Irving P. Johnson delivered an eloquent address, with much pointed and sound advice to the medical class. The four principles he advocated for the true success of the physician were, earnestness, sympathy, personal purity and moral courage.

An orchestra gave several musical selections.

Many of the thirty-four graduates, the largest class ever graduated in the history of the college, received beautiful floral remembrances at the close of the program.

Dr. Leo M. Crafts, the Dean of the Faculty, announced that the next term would begin Sept. 15th, 1903.

The following is a list of the graduates:

Ferdinand G. Benn, Ludwig Lima, Oscar Owre, Charles Swenson, D. K. Caldwell, Ph. B., Bertram E. Lord, John F. Plehn, Frederick G. Watson, Victor A. Young, Denton J. Cooper, George M. Doran, Carl P. Friberg, Jacob M. Heimark, William J. Kennedy, George McCullagh, John J. Mertens, Ralph S. Mitchell, Edward H. Nelson, A. E. Pack, D. D. S., Alex. J. Poirier, James Thom, James E. Cramond, John M. Ekrem, Gilbert L. Gosslee, August E. Johnson, Fritz L. Kling, Harry N. Melech, Robert Scott Miles, Andrew F. Moynihan, Jens Ohnstad, Fred C. Poehler, Auvigne Randall, Asbjorn Torland, Arthur A. Whittemore.

NOTICE.

The Minnesota State Medical Society will meet in St. Paul on the 17th of June, and continue in session three days.

The State Fair.

Great preparations are being made for the State Fair to be held here in September next, and with the new buildings, increased prizes and greater attractions it promises to exceed in interest any previous display in the northwest. The officers of the society are experienced in the business, and will not fail in their exertions to make the fair not only a successful one financially, but satisfactory to both exhibitors and all visitors.

The American Medical Association.

According to all reports the session of the American Medical Association at New Orleans last month was one of the most successful, both as to number present and the interest manifested in all the different sections. The papers read, some of which have already been printed, were received with well merited attention. The contrast between the meetings now and such as the older members can recall must be very great, and highly satisfactory to those who have labored for the elevation of the society. They meet for work now: but in the early history of the association they gathered, many of them, for a good time, and they had it. So far the new organization seems to promise well for the future good of the society and the profession.

Report of the Government Laboratories of the Philippine Islands for 1902.

From this report it is learned that the United States government intends building a new and extensive laboratory at Manila for research into the origin of tropical diseases, a subject in which it has been heretofore somewhat limited in its efforts and inadequate facilities. The plan includes rooms for chemical and biological work. The rocks, minerals, soils, rocks, water, food products, beverages and other materials will be examined. The biological laboratory involves diagnostic work and analysis, bacteriological, etc., for hospitals, physicians, boards of health, the police force, and other government institutions as such services may be required. The investigation of tropical diseases will include not only human beings, but domestic animals, and cannot fail in bringing to our knowledge a vast amount of substantial information concerning all of these matters which have been unknown for want of sufficient time and means for thorough and practical research. Such a laboratory as proposed will attract the attention of scientific men from other parts of the world, and will be headquarters for them to meet and compare notes. This interchange of views will prove highly profitable, and expeditions which have been hitherto only of a temporary character, and of limited materials for investigations, will have better and more permanent accommodations for accurate scientific work.

Cancer and Immunity.

In his oration before the American Medical Association Dr. Jonas of Omaha made a very concise presentation of the present status of the cancer problem. Although researches have hitherto failed to demonstrate what cancer really is, or how it can be prevented or cured, the work which is so vigorously pushed forward by a host of workers is bound sooner or later to bear rich fruit. Bacteriology has failed to demonstrate a specific germ, although a host of microorganisms have been brought forward by as many claimants. None of these has fulfilled the necessary requirements, viz: (1) the organisms must be isolated; (2) a cancer must be produced when the organism is introduced into another body; (3) the organisms must be recovered from the cancer produced. It has been shown that, while the first requirement has only apparently been fulfilled, the second has been in a number of cases seemingly produced, but more careful investigations have proven that the experimental growths were not cancer. The third requirement has not been fulfilled.

The cancer germ, however, may yet be discovered. It may be too minute to be observable under the present powers of the microscope, or perhaps a new staining fluid may yet be found which will possess the requisite affinity for its complex molecular constitution. It is probable that the chemical study of the cell constituents and the fluids that surround them will be the direction in which the best results of investigation will yet be found.

Virchow's cellular pathology and Ehrenburg's bacteriology have led us into a new era, the humoral or chemical. The trend of research at the present time is beyond cells and beyond bacteria. "It is to determine," as Jonas puts it, "the chemical operations in and around the cells. This line of research began in the leucocytes because they were the most available. In their study it was possible to establish basic principles. From the leucocytes to the erythrocytes was only a step, and then the epithelial and connective tissue cells received attention. This field of research is a new one. It is occupied by a vast army of patient, earnest toilers. The fruits of their labors will be beyond our greatest expectations."

The study of immunity in disease may be traced back to John Hunter, who more than a century ago was familiar with some antiseptic properties of the blood. He found that a small amount of putrefying material could be added to a given quantity of fresh blood without producing putrefaction. He spoke of this as "the living principle of the blood." Hunter's observations were forgotten until 1888, when Nuttal began his work in Flugge's laboratory, studying the anti-bacterial property of the body fluids, especially the blood serum. Then followed Metschnikoff with the discovery that the leucocytes and other cells took part in the process of infection and established his theory of phagocytosis. In 1894 Pfeiffer discovered "the extra cellular disintegration and the solution of cholera spirilla in the peritoneal cavity of immunized guinea pigs." Next came Behring's great discovery of antitoxic immunity.

And so the search has gone from step to step until the principle of toxins and antitoxins has become as firmly established as any other in medicine or surgery.

Dr. Jonas concluded his interesting oration in the following words:

"Now, then, will it be unreasonable to hope that when protoplasmic changes are thoroughly understood and when the body sera have given up their secrets and the influences that govern cell growth, that we may also find the antibodies which will inhibit cell multiplication beyond natural bounds?

"The studies in the field of immunity have, as yet, only assumed the proportions of the initiatory stage. A vast unexplored wilderness lies before us. The pioneers have begun their work well. They have outfitted themselves in a manner that will, in the near future, enable them to throw unexpected light in the pathway of their conquest of discovery. They are only on the verge of this vast domain. What lies beyond the borders we can no more foretell than could Boyer know that in twenty-four years after his death we should have an anaesthesia, and that in fifty years the world would have an antiseptic surgery. And yet, in the light of our present knowledge, the hope, amounting to a conviction, arises in us that even in our lifetime, if we are spared a few years more, we will have an exact biodynamic and biochemic science that will make diagnosis accurate and precise, and one that will enable us to treat and control all infections with an exactness not now possible. While the surgeon is now constantly encroaching on the field of the internist, the time is not far distant when the physician may not only reclaim his own, but with it that large group of neoplasms known as malignant growths that from time immemorial has been the exclusive property of the surgeon."

MEDICAL EDUCATION.

(Medical Review of Reviews.)

The Rockefeller Institute for Medical Research.

The scope of this institution has recently been enlarged. Heretofore, its work has been carried on by some twenty investigators, supported by scholarships in nearly as many of the largest universities in this country and abroad.

In June last, Mr. Rockefeller gave an additional $1,000,000 to establish a laboratory of medical research that will eclipse anything of its kind in this or any other country. Dr. Simon Flexner, professor of pathology at the University of Pennsylvania, has been secured to take charge of the new work, beginning with July next. The laboratory will be ready for work by October, 1904.

The laboratory building will provide facilities for investigations in physiological chemistry, hygiene and preventive medicine, pharmacology and therapeutics, normal and pathological physiology and bacteriology. The plans also include the erection of a hospital where special groups of patients may be treated, in connection with the laboratory investigations; and the education of the public in matters of hygiene by means of lectures, a hygiene museum, and published literature.

The Journal of Experimental Medicine, formerly established by Dr. William H. Welch of Johns Hopkins University, will also be published by the institute.

The directors are Drs. William H. Welch, Baltimore; T. Mitchell Prudden, New York; Simon Flexner, Philadelphia; Theobald Smith, Boston; C. A. Herter, Herman M. Biggs, and L. Emmet Holt, New York.

The Promoter.

"What can I do for you?' the physician asked the good woman who had entered his consulting room.

"I think I should have a commission," she returned, respectfully but firmly. "Every child in our street caught the measles from my baby."—Youths' Companion.

Original Articles

The Part that Affections of the Upper Air Passages Take in Producing Asthma.

By. Dr. W. H. Cooke,
501-2 Masonic Temple, Minneapolis.

Asthma, as defined by Dr. W. Osler, is a term which has been applied to various conditions associated with dyspnœa. In many cases of bronchial asthma a strong neurotic element is present. Some hold that bronchial asthma is due to spasm of the muscles of the smaller bronchial tubes, others that it is due to a hyperaemia and turgessence of the mucosa, resulting from disturbed innervation, either ammogastric or vaso-motor. Briefly, then, asthma may be defined to be a neurotic affection, characterized by hyperaemia and turgessence of the mucosa of the smaller bronchial tubes. The attacks may be caused by direct irritation of the bronchial mucosa or induced reflexly by irritation of the nasal mucosa; also reflexly from the stomach and intestines., Now, since patients subject to attacks of asthma may have an attack of hay fever at the same time or preceding the asthmatic attack, we conclude that the conditions of the system which cause bronchial asthma must be closely allied to those which produce hay fever. What, then, are the conditions which favor an attack of hay fever?

First. A hyperaemia and turgessence of the mucous membrane of the nose, with a hyperesthesia of the terminal filaments of the sensory nerves and hypersensitive areas in the nose. We find on examination of the nares' sensitive spots on the anterior and posterior ends of the inferior turbinals; also on the middle turbinals, which, when touched with a probe, cause redness and swelling, followed by all the symptoms of a mild attack of hay fever.

Second. The second condition essential for hay fever is a nervous temperament, a hyperesthesia of the nerve centers or, as some prefer to say, a neurotic diathesis.

Third. There must be an excitant, as dust, pollen, odors, chilling of the body, and mental emotions.

Isolate the hay fever sufferer from the excitant, destroy the sensitive areas, or sedate the hypersensitive nerve centers, and the patient is happy so far as hay fever is concerned.

Bishop has suggested that hay fever is a misnomer, and that the affection should be more scientifically called a nervous nasal catarrh, for it is the nervous element that figures predominantly in the trouble and should have our consideration. We have a nervous intestinal catarrh, a nervous dyspepsia. Faulty digestion produces urticoria, worms in children produce a congestion of the turbinal tissue, and is unconsciously magnified by the child rubbing and picking its nose. So, in my opinion, it is not out of the trend of medical views to hold that asthma and hay fever are functional disturbances of the nervous system.

The nerve supply to the nares is favorable for these reflex troubles. The mucous membrane of the nares is supplied with nerves from the spheno-palatine or Meckle's ganglion, and the ganglion is made up by three roots, viz: a sensory root from the superior maxillary, the motor root from the facial, and the sympathetic from the carotid plexus.

Now when we recall the distribution of the pneumogastric and its close connection with the facial through the auricular branch, and with the glosso-pharyngeal through connecting branches, is it any wonder that we have reflex troubles in the nares and bronchials?

The prevailing opinion that asthma can be produced from a local nasal condition, as well as hay fever, is a point in favor of those troubles being of a reflex nature, and due to the same etiological factors.

Treatment. Remove adenoids and polypi and treat any condition of the mucous membrane that interferes with free nasal respiration and circulation. The neurotic condition by fresh air and tonics. The excess of uric acid in the blood by alkalies.

Mr. G., a young man of 17, came to my office suffering from asthma. Had had it from a child. When twelve years old he went to visit a friend in New York, where he remained for a year and came home much improved in health and not much troubled with asthma. Up to the time of coming to my office he had slight attacks of asthma, but for the past week had a quite severe attack. His father and mother both suffer at times from attacks of hay fever. On examination I found a small polypus in each nostril; the naso-pharynx nearly blocked by adenoids; the mucous membrane of inferior turbinal on right side very hyperemic and swollen so as to touch septum. I removed the adenoids and polypi and cauterized the anterior end of right inferior turbinal, with the result that up to the present that patient has been able to breathe freely through his nose and has not had an attack of asthma.

Many hold to the theory that the same cause which produces rheumatism and gout produces asthma, and Bisho and Tyndel, each independent of the other, after studying hay fever, came to the conclusion that it was due to an excess of uric acid in the blood. Quinquad, by giving from 3 to 6 grains of uric acid to a patient a day, found that boils and eczema developed. Now, the mucous membrane of the nose is a continuation of the skin, more delicate in structure and more richly supplied with nerves, and what is more analagous to a nasal coryza than a weeping eczema?

Alexander Hoy was a sufferer from Megrim and he observed when an attack came on that the uric acid in the blood increased to one in twenty-five of urea. He thinks that headache from uric acid is produced by it exciting a vaso-motor contraction of the arterioles of the brain, causing an anaemia. Now if this is the physiological effect of uric acid there will be a congestion somewhere else in the system, and where more likely than in the vascular erectile turbinal tissue or bronchial mucous membrane. With this condition a neurotic diathesis and an excitant, an attack of asthma or hay fever may be provoked.

In conclusion, any obstruction to the free circulation of the blood in the nasal passages, as adenoids, polypi, spurs, deflected spephuis, causes hyperaemia and turgessence of the mucous membrane, a condition provocative of hay fever and asthma.

Treatment of the Common Clinical Forms of Gonorrhoea in the Female.

By Dr. R. Oliver Kevin.

(Read before the Obstetrical Society of Philadelphia.)

The author deplored the fact that too little attention is given by physicians generally to the study of gonorrhoea in the female, and as a consequence the disease is comparatively seldom recognized until the woman has communicated the disease to others. The baneful effects of gonorrhoea in the female were mentioned and asserted to be more serious than syphilis; as evidence of this were cited many cases of pus tubes, peritonitis, cystitis, abscesses, endometritis, etc., which occasioned much suffering and chronic invalidism. The point especially emphasized was the important role played by the infection of Bartholin's glands in propagating the disease to the male and leading to apparently fresh infections in the woman herself; the cause of this is the extreme frequency of involvement of these glands, which break down, forming small sinuses full of gonococci, which will escape the observation of physicians unless pains are taken to critically examine Bartholin's glands in every woman presenting herself with symptoms of irritation or inflammation of the parts. The following is a classification as to structures involved: Urethra, cervix, vagina, vulva, uterus, rectum and inguinal glands. If the uterus is the seat of an acute gonoccoccus infection local measures should be avoided owing to the danger of favoring the communication of the disease to the tubes, ovaries and peritoneum; in such cases the patient should be placed in bed and treated on general constitutional principles until the acute stage has subsided, after which injection of one-half ounce of 10 to 20 per cent solution of argyrol should be carefully made once daily. In involvement of the urethra, a 5 to 10 per cent solution of argyrol should be made three or four times daily by the physician or the patient; the writer stated that since adopting this plan of treatment no involvement of the bladder has been observed in his cases. Should, however, infection of the bladder exist, urinary antiseptics should be administered internally and the bladder be irrigated with weak solution of silver nitrate, copper sulphate or potassium permanganate, after which one-half ounce of a 20 per cent solution of argyrol is injected in the bladder and allowed to remain. When the urethral follicles or Skene's glands are involved the urethra should be dilated with ordinary sounds, lubricated with Fenger's ointment, or preferably 20 per cent argyrol ointment in lanoline; in some cases the glands are best treated by injection (blunt-pointed hypodermic) with carbolic acid or silver nitrate, 20 grains to the ounce.

In gonorrhoea of the cervix the parts must be first cleansed of adherent secretions, and a few drops of 20 per cent argyrol solution or 5 per cent protargol injection with a long-nozzled syringe, care being taken to previously expel all air from the syringe to avoid production of uterine colic; treatment must be made daily. Tampons saturated with 20 per cent argyrol solution should be left in contact with the cervix for from 4 to 6 hours in order to obtain the continued gonococcidal effects of the drug.

When the uterus is involved, the organ should be irrigated with any of the following solutions: Creolin, lysol, normal salt solution, potassium permanganate, argyrol, protargol; or a mixture of carbolic acid, sulpho-carbolate of zinc and glycerine; after irrigation a strip of gauze saturated with 20 per cent argyrol solution should be packed in the uterine cavity and allowed to remain. In some cases after subsidence of the acute stage the cervix and entire vaginal mucous membrane should be painted with silver nitrate solution, 10 grains to the ounce. For the catarrhal process that remains no combination equals in efficiency a mixture of ichthyol, 25 per cent, argyrol, 25 per cent, and glycerin, 50 per cent, used freely as a local application every day or two. Uterine curettement is dangerous when gonorrhoea exists.

The author summarized his paper as follows: Always make a thorough examination of the region of Bartholin's glands in suspected cases. If these are infected, flush the vagina with antiseptic solutions, make free incision of the sinuses and glands, remove diseased or necrosed tissue with a curette, and swab the entire surface with 50 per cent argyrol solution, strong carbolic acid, or nitrate of silver. Argyrol is to be preferred, because it is non-irritating and possesses deep penetrative power. Never use local treatment in an acute gonorrhoea of the uterus, but put the patient at absolute rest and endeavor thereby to prevent the spread of the disease to the uterine adnexa and peritoneum.

Discussion.

Dr. F. H. Maier: I have enjoyed Dr. Kevin's paper very much, although his intrauterine method of treatment at times startled me. It is in this class of cases that we must proceed with exceeding care, or we are very liable to bring about an exacerbation of the disease. I think the tendency of the gonoccocic infection is to remain more superficial, the microorganisms lying in and between the epithelial cells. For this reason the object of our treatment should be to bring about thorough desquamation of the superficial tissues. Ichthyol lends itself very favorably to this. Lately I have been using a 50 per cent formalin solution with marked benefit.

Dr. Oliver Hopkinson: I would like to ask Dr. Kevin what salts of silver he uses, and which he prefers under certain conditions. I have not found much difference in the use of protargol from that of the old nitrate of silver. I would like to know whether he has found these new salts superior as applications to the old silver salts?

Dr. W. S. Stewart: I have had a little experience with gonorrhoea in various forms, particularly in males. My largest experience was during my service in the Civil War. I found my results were very much better if I began with a mild treatment. The inflammation resulting from strong caustics was more terrible than the original disease.

Dr. John C. DaCosta: The younger Gross, who was most successful in treating these cases, used continually to urge common sense in treating them: and himself used a great deal of common sense in his methods. In the primary inflammatory stage he used the mildest posible remedies. I have not much confidence in the new salts, believing them to be the preparations of manufacturers who are interested in pushing them. Some possibly use them on the principle of the old doctor's advice to his son: "My son, use new remedies, while they are fashionable and while they cure." In the chronic cases, I use the old fashioned nitrate of silver in solution of not less than 60 grs. tó the ounce, following the application sometimes by salt solution, and find that one, or sometimes two, applications often cure an old chronic gonorrhea.

Dr. Kevin, in closing the discussion, said: Swabbing out the uterus will not cure if the gonorrhea is not located there. Gonorrhea vaginitis is very rare. I have seen it but a few times in my life. I have had no experience in the use of formalin. Menge reports success with it in the chronic cases. I have been afraid to use it in office practice, and if employed in the uterus, I would advise that the cervix be first dilated to give good drainage.

In the chronic cases I have found the use of argyrol and protargol satisfactory, also nitrate of silver, although it is not as penetrating as the silver salts, protargol and argyrol. I have had good results from them all used in the cervix. My experience has been that if I am not able to get rid of the purulent tenacious drop at the cervical mouth, to go into the uterus with the old fashioned treatment of the tincture of iodine and carbolic acid, when the character of the discharge will soon change for the better and lose its mucopurulent appearance.

The Electro-Thermic Angiotribe in the Removal of a Large Suppurative Tuba-Ovarium Mass with Resection of Four Inches of Colon and End to End Anastomosis.

By Dr. A. J. Downes, of Philadelphia.

Dr. A. J. Downes read a paper on the use of the electro-thermic angiotribe in which he reported a case of suppurative tubo-ovarian disease forming a mass that completely filled the left side of the pelvis with dense adhesions to surrounding structures, including a portion of the descending colon, which after being freed from its surroundings, presented a thick, wide pedicle, closely associated with the uterus. In order to remove this with the least possble danger of contaminating the field of operation by escaping pus, the electrothermic engiotribe was applied close to the side of the uterus for forty seconds. Upon removing the mass by section on the outer side of the thermic blade and releasing the instrument, it was observed that the stump left by the operation was a well cooked, and therefore, sterile, non-oozing ribbon of tissue closely hugging the uterus.

The colon stripped of its mesentry, and partially denuded of peritoneum to the length of four inches, was resected as follows:

The bowel was clamped by his 3/8-inch angiotribe at either extremity of the denuded area and the current turned into the blades for fifty seconds. After removing the blades section was made through the middle line of the ribbons thus formed. With the ends of the bowel thus occluded anastomosis was performed by a triple layer of continuous chrómicised cat gut sutures, without a sight of, or contact with, the mucous membrane. With the little finger the bowel was now invaginated at some distance from either side of the site of the operation with a view of breaking through the ribbons and thus reestablishing the calibre of the canal. Gas escaping from one section into the other proved the success of this manipulation.

Five actively bleeding points, deep in the pelvis, were controlled by grasping them with the tips of straight forceps, heated with this so-called electrotherm. Two heavy bands of torn omentum were haemostased by 1/4-inch blade thermic angiotribe in twenty seconds.

The abdomen was closed without drainage. On the fifth day the patient had three natural bowel movements. Her recovery thus far has been uninterrupted.

Dr. J. M. Fisher: Upon Dr. Downes' departure for Europe the patient was left in my charge and it is now twelve days since the operation. There has been an aseptic convalescence from the beginning, and the bowels are moved daily. As indicated in the paper, I assisted Dr. Downes in the operation. The patient presented complications that proved of especial value in the demonstration of the practical utility of his apparatus. The mass removed was closely associated with the uterus, enveloped by densely adherent omentum and the lower portion of the colon, it was firmly bound to the rectum and floor of the pelvis and was enucleated with considerable difficulty. Had the ordinary method of haemostasis been employed the close proximity of the mass to the uterus would have required litigation of the wide pedicle in sections and an incision of the parts through pus degenerated areas. With this instrument, however, the whole width of the pedicle was grasped, the electric current was applied to the blades for forty seconds, and the whole mass was removed within less than a minute, leaving a well cooked, sterile, and non-oozing stump that was closely hugging the uterus without a drop of escaping pus to contaminate the field of operation. To me the resection of the colon was a revelation. The intestine partially denuded of peritoneum and stripped of its mesentery to the length of at least four inches, certainly was sufficient to demand resection of this portion of the gut. In doing this he grasped the ends of the section to be removed with the angiotribe, and by pressure and the electro-thermic method hermetically sealed the lumen of the gut. Cutting through the middle line of the dessicated ribbons thus formed after releasing the instrument, not alone left the ends to be reunited, sealed and sterile, but the closed cooked ends of the portion of gut removed likewise rendered this a negative factor as a possible source of infection. The cooked ribbons of the bowel within the abdomen were now placed one upon the other and the anastomosis effected as described. He now invaginated the intestine from either side of the line of suture and broke through the agglutinated structures, and thus re-established the continuity of the canal. At no stage of the operation was it possible for either fecal matter or gas to escape: in fact, no portion of the intestinal mucosa was exposed to view. Taken all in all, I am free to say, it was the neatest, and, antiseptically considered, it was the cleanest and most perfect piece of bowel surgery I have ever witnessed. I cannot conceive how one could do an intestinal resection with greater safety than by this particular method. Anastomosis was made in much less time and just as effectively as if it had been done by any one of the commonly recognized procedures, minus the possibility of infection from exposure of the lumen of the gut. Recently I read a report of Dr. Keefe, surgeon to one of the hospitals in Providence, R. I., who has done a number of resections with the Downes instrument upon dogs, and in no instance did he consider it necessary to separate the agglutinated ends before closing the abdomen, the continuity of the canal in every case becoming re-established within a few days by sloughing of the inverted ends. The pathologic report upon the specimen removed by Dr. Downes has not yet been received. We believe it to be a suppurating ovarian fibroma.

Dr. Kevin: I saw Dr. Downes operate on a varicocele by his method with the angiotribe; there followed no complication or stitch abscess, and the case recovered more rapidly than is usual in the ordinary open operation.

Personally, I think I would feel more secure in an abdominal operation upon myself to have a good stout ligature on a bleeding abdominal vessel. I also saw Dr. Downes remove the sac of a hydrocele and there was no sloughing or secondary infection, while the recovery was more rapid than usual.

Dr. Nassau: I have seen Dr. Downes use the forceps but once. That was before he developed the angiotribe. Personally, I know nothing of the use of the instrument. It seems to me that the sealing over temporarily of the ends of the bowel is a very questionable method. In doing end to end suture of the intestines it is an important question whether it is not better to put the sutures through the entire coat of the bowel as suggested by Connell, and tie the last stitch inside, and whether it does not make a better and safer union. I have used that method in one gastroenter-ostotomy, and I have been perfectly satisfied regarding the line of union between the intestine and the stomach. The patient, however, died from hemorrhage. If this method of Dr. Downes were used to make end to end suture it would be impossible to tie our sutures in the bowel. The Lembert suture does not hold a very great amount of tissue, and unless one is certain to pick up the submucous coat in the suture, one might as well not sew it at all. I think some of the gentlemen who have studied the question of intestinal anastomosis would think it safer and better to sew the mucous membrane separately, making a row of approximal sutures, and over all a line of sealing sutures. If the peritoneum is going to take care of the pus from the pus tubes, I think we do not need to fear a slight amount of infection from the bowel contents during anastomosis. This danger of infection can be eliminated by packing off. I would only be afraid to trust the peritoneum in the appendix cases, though Dr. Morris of New York has claimed such nice results. I have seen other gentlemen operate in the same way with great success. In one case which left the hospital last week a considerable amount of pus was spilled, but the wound was disinfected and closed without drainage. There was little pain, no fever and no suppuration. In a second case the appendix was so plastered over with lymph that dissection was difficult. When it was stripped loose and the adhesions broken up the wound was disinfected, the abdomen closed, and the progress was satisfactory. If in such cases we can take care of infection, why should we use a method that might possibly give insecure stitching and in which there is difficulty in applying the mesenteric portion of the stitch?

Dr. Franklin: I have seen Dr. Downes operate eight or nine times, and I have seen the cases afterwards and know that the cures were perfect. He seems to get better results in the inflammatory and pus cases by the use of his forceps than by the ordinary ligature operation. Whether this is due to the fact that he can remove more infected tissue, or that he leaves less raw surface after operation, I do not know. He has no trouble in controlling hemorrhage. His present method with the angiotribe is much to be preferred to the one used several months ago.

Dr. Maier: Through Dr. Fisher I extend my congratulations to Dr. Downes. I have only seen the electro-thermic cautery used once. I decided at that time that it was the ideal method of dealing with a pedunculated mass. I wondered how he would proceed in just such a condition as presented here this evening. From the paper and Dr. Fisher's description, I think he has overcome the difficulty of sessile attachment. There is remaining one other class of cases which I would like to see Dr. Downes deal with. It is those inflammatory conditions in which the structures are so friable that it is only after the most arduous and painstaking care that we are able to control the hemorrhage. If he is able to dessicate this tissue, and thus rapidly stop the bleeding, I will confess it to be, in my judgment, the ideal method.

Concerning the bowel surgery, it takes time and some handling of the ends of the intestine to introduce Lembert sutures; and I confess I should feel safer with the forceps. There is some difference in a pedicle sealed and dropped back into the pelvic cavity, and the end of a gut temporarily sealed and subject to the subsequent handling required to introduce sutures.

Dr. Fisher closed the discussion of Dr. Downes' paper: I am convinced that the electro-thermic angiotribe is one of the coming things in surgery. Dr. Downes has a well perfected instrument and does good work. The mass in this particular case could not have been removed with the ligature without the extravasation of pus, but with the use of this instrument it was removed without the escape of anything to contaminate the field. Time is an element in abdominal surgery. The thick, wide pedicle to which he applied the whole length of the blades was thoroughly cooked within forty seconds and the mass removed; and the stump that was left was necessarily antiseptic, and from the homogenous appearance of the compressed structure I felt confident that there was no danger of hemorrhage. As indicated by Dr. Nassau, he has improved his instrument very materially in the last few months, and has combined the principle of the angiotribe with that of the cooking process first introduced by Dr. Skene. Dr. Skene's instrument was cumbersome; it could not be boiled; the blades could not be kept cool while in use, and three or four minutes were required to cook structures. As already indicated, Dr. Keefe has done a number of operations with the Downes apparatus with uniform success, and those upon the intestines of dogs are worthy of especial consideration by surgeons, and should prove of some interest to our antivivisection friends. Even through the peritoneum, as has been suggested, will at times tolerate and dispose of small quantities of pus and fecal matter, it is a danger to be avoided nevertheless; the object of us all in our abdominal work is to attain as near as we possibly can the ideal aseptically. If an antestinal anastomosis can be done without difficulty and without exposing the lining membrane of the bowel, and within one-quarter of the time usually expended in such work, I think it is a common sense proposition for us to adopt the plan that offers these advantages. It is interesting to note that those who have gained sufficient familiarity with the use of the instrument consider it indispensable in their work. The objection has been urged that owing to the absence of the electric current in private houses, the use of the instrument is necessarily limited. In answering this we might say that abdominal operations at this advanced day are usually performed in hospitals, and of these but few even in the smaller towns are unprovided with an electric outfit to secure the necessary current.

Notes on the Diuretic Action of Theocin.

By J. Stein, M. D., Physician to the Empress Elizabeth Hospital, Saaz.

Although our experiments with the new diuretic does not equal in number those of Minkowski (14 cases), and far less than those of Schlesinger (40 cases), I would like to place the results on record for two reasons: First, because the powerful diuretic action of the drug strongly commends its use; and, secondly, on account of the fact that Schlesinger in two cases reports unpleasant by-effects, that is, attacks of epileptic character; and hence further observations seem desirable.

Theocin was employed by us in ten cases, comprising 7 of diseases of the heart and its valves, with edema of the skin and ascites, 1 of Bright's disease with dropsy, 1 of cirrhosis of the liver, and another of tuberculous peritonitis, both with ascites. In the first mentioned seven cases, with the exception of one in which vomiting and diarrhoea compelled us to discontinue the remedy, an extraordinary increase of the urinary secretion was obtained, so that aside from two cases in the advanced stage which terminated fatally (one of nephritis and one of insufficiency of the mitral valve), the accumulations of fluid disappeared and the patients left the hospital freed of their disturbances. The quantity of urine which previous to the administration of theocin amounted to 1,400 to 600 ccm., increased under a dose of 0.3 gm., t. i. d., to 2, 4 and on one occasion to 6 litres a day. In two cases digitalis had been previously given, without success, and in another a combination of digitalis and diuretin, while the administration of theocin produced the desired diuretic action. The result was negative in the case of tuberculous peritonitis, and a moderate effect was obtained in that of hepatic cirrhosis. Epileptiform attacks, such as have been observed by Schlesinger, were never seen by us, nor did we have occasion to note other unpleasant by-effects, except in one doubtful instance of vomiting and diarrhoea, although the remedy was always administered in the pure state.

Without reporting any detailed histories of cases, we are able to confirm the conclusions of Minkowski and Schlesinger, that theocin in doses of 0.3 gm. t. i. d. is an excellent diuretic, which in our cases caused no special by-effects, and, we would say, was always willingly taken by the patients.

Prager Med. Wochenschrift, April 16, 1903.

Upon the Local Use of Cocaine in the Nose.

By Wm. G. B. Harland, M. D.

Instructor in Laryngology at the University of Pennsylvania; Aurist and Laryngologist to the Dispensary of the Presbyterian Hospital.

From the Philadelphia Medical Journal, May 23rd, 1903.

The local use of cocaine is barely alluded to in most text-books, its advantages are dwelt upon, but usually no hint of its dangers are given. There is scarcely a rhinologist, however, that has not had an alarming accident occur in his practice from cocaine, and as a consequence some of our ablest specialists hardly dare to use the drug at all. It may be well, therefore, to review briefly the complications that may occur, to give some idea of their causes and to consider how they may be avoided.

It is the writer's belief that accidents occur because of errors in dosage, and he agrees with Grayson when he says that there is nothing treacherous or exceptional in the action of cocaine, that, although powerful, it is quite controllable, and that, by estimating the vital power of the patient, we can obtain a fairly accurate idea of the amount of the drug we can use with safety. The usual dangers can be summed up as follows: (1) Drug habit; (2) secondary congestion and hemorrhage; (3) local subjective sensations; (4) effects attributed to the so-called idiosyncrasy.

(1) Drug Habit. The cocaine habit is too well known to need any extended mention here. It is readily acquired, is terrible in its results and is practically incurable. No physician should ever give cocaine in any form into the hands of his patient for the relief of nose or throat symptoms, unless the patient is in the last stages of tuberculosis or similar painful and hopeless disease; it is even wise not to inform patients when cocaine is applied. One views with horror and alarm the careless way in which prescriptions for cocaine snuffs and sprays are recommended for hay fever, and even for simple colds in the head.

(2) Secondary Congestion and Hemorrhage. Applied to the mucous membrane of the nose, cocaine produces not only a local anesthesia, but also a local anemia. The latter is due (according to Wood) to action upon the constrictor nerves and unstripped muscles of the arteries and veins. After an hour or two this ischemia is often followed by a marked congestion, usually in proportion to the amount of the previous constriction, and hemorrhage occurs if the mucous membrane has been broken. The reason why the congestion takes place has not been discovered. Bosworth taught that the bloodvessels are less dilated after cocainization is past than they were before, but the opposite view is the one now generally held. Troublesome secondary congestion can usually be avoided by restricting the strength and amount of the cocaine solution used. Hemorrhage, if it occurs, will, of course, be in proportion to the amount of congestion present. Iodoform gauze or similar packing makes a satisfactory guard against this important complication.

(3) Local Subjective Sensations. In some persons a sensation of constriction and strangulation is induced if even a small amount of cocaine reaches the rhinopharynx and pharynx. As absorption takes place slowly in these localities, the paresthesia is more disagreeable than dangerous, and can be ignored if the solution is applied only when it is needed.

(4) Effects Attributed to the So-Called Idiosyncrasy. Just how cocaine produces the alarming faintness and other symptoms which sometimes arise, symptoms that have been ascribed to a peculiar idiosyncrasy of the person affected, has not as yet been explained. Probably, as the weak pulse, pallid lips and cold, clammy skin indicate, it is due, as Reichart suggests, to an overdose of cocaine paralyzing directly through the circulation the intrinsic nerve apparatus of the heart. This effect is instant and profound. Syncope and convulsions may also occur from anemia of the nerve centers. Randall recorded, some years ago, a case of cocaine poisoning that occurred

in a child, six years of age. He estimated that one-fifth of a grain was the maximum that could have been absorbed, about 5 minims of 4 per cent solution having been applied to the turbinates with the applicator. Shortly afterward the child became weak and fainted. When seen half an hour later the patient was delirious and very restless, the pupils were dilated, the face flushed and dry, temperature, pulse and respiration were not affected; within 24 hours the child was well. This case was unusual, because it occurred in a child, children being seldom affected by cocaine applied locally in the nose, and because of the symptoms that followed syncope, which were more like the symptoms of general cocaine poisoning. In the typical adult case the patient suddenly feels weak and faints, the pupils become dilated, the lips and face pale, the muscles rigid, convulsive movements of the arms and legs may occur, and then, in the course of a few minutes, recovery ensues, general weakness being the only after-effect.

Various explanations can be advanced to account for this apparent susceptibility to cocaine. Ball believes that accidents from cocaine result from its use in spray form. The lining membrane of the nose presents a broad vascular surface, making absorption rapid, and when a spray is used, hard to measure and regulate; nevertheless, although toxic symptoms are readily produced when the spray is carelessly used, the symptoms sometimes occur when the drug has not been applied in this way. In a person weakened by age or illness, and whose circulation is poor, absorption may take place so slowly as to tempt the operator to deluge the tissue in order to hasten the local effect. In such a case, after absorption is completed, poisoning may be expected to occur. One can readily realize that the solution applied to a greatly distended turbinate will soon find its way into the large venous sinuses of the nasal mucous membrane of this part, and, when the constricting action is at last produced, solution and blood will be at once thrown into the circulation and quickly reach the heart. In persons of nervous and sanguine temperament, with especially vulnerable nerve tissue and with an active capillary circulation, less amounts are required to bring about therapeutic and toxic results. Such a condition of the circulation and nervous system is produced by the exhibition of alcohol, which explains the unfortunate results that occasionally follow the application of cocaine to patients who have taken whisky to fortify themselves for an operation. In the weak, old and nervous, therefore, cocaine must be used with caution.

It will not do to overlook the fact that occasionally syncope will occur when cocaine has not been used at all. Weak, nervous persons may collapse from sheer apprehension, and, as is well known, stout, hearty men sometimes faint at the sight of blood or while being vaccinated. Differentiation as to the cause of the symptoms, therefore, is not always easy, and, no doubt, toxic effects arise usually from a combination of causes, but a sufficient number of cases is found in which faintness occurs when ordinary applications of cocaine solution are made, and do not occur when cocaine is omitted from the solution applied, enough cases to justify the belief that in them certainly cocaine alone is responsible for the ill effects.

Adrenalin chloride has proved a most valuable aid in lessening the dangers and in enhancing the powers of cocaine. In hay fever and like congestions it may be used as spray in the strength of 1 to 10,000, or in these and in other cases be applied locally in the strength of 1 to 4,000. Both cocaine and adrenalin act slowly and, therefore, one-half to three minutes should be allowed to elapse between the applications. Schleich's solution, instead of cocaine, may be injected after such operations as that of resection of the columnar cartilage.

In closing, it may be said that clinical experience warrants the belief that cocaine in spray form can safely be employed if limited to a few gentle puffs of a 1 per cent aqueous solution. If used on the cotton-tipped applicator, a 5 per cent solution should be the maximum strength employed. It should be applied carefully and accurately, half a minute at least allowed between the applications, and the tissues should be repeatedly inspected, touched and tested, so that no more cocaine than is necessary shall be applied. Adrenalin chloride solution should be employed to aid in bringing about the effects desired. If due attention is paid to these directions, no one need fear any untoward result from the local use of cocaine.

The Outlook for the College Graduate in America.

The advance of women to executive positions of trust and responsibility in business and the professions; the increasing demand by corporations for university men; the impossibility of achieving success through influence or "pull;" the impracticability, as well as menace to the public, of any attempt, whether on the part of corporate financiers, labor leaders or individuals, to obtain "something for nothing," to acquire "unearned wealth," to restrict the output; that "organization," whether applied to property or labor, is merely descriptive and not substantive—that "organized" is the adjective, "property" and "labor" the substantive; the dangers which threaten our financial condition from indigestible securities—these were the principal topics treated by James B. Dill, the well known corporation lawyer, in the commencement address this afternoon at the University of Minnesota.

His subject was: "The Outlook for the College Graduatein America."

He declared that the trust movement, instead of restricting the field for educated men and women, opened for them new opportunities for usefulness. Mr. Dill spoke most hopefully regarding the present outlook for educated men and women, illustrating his points with anecdotes drawn from Wall street experience.

The speaker asserted that "A college training is a contributing element to business success. Direction of great enterprises calls for the services of educated men and a highly trained intelligence is required to cope with the difficulties of meeting competition, solving new problems and resisting attacks of rivals.

"A man must be a good generalist to become a good specialist, and for this the best preparation is a well-spent college course.

"The corporation movement instead of crowding men out has opened for them new fields of usefulness and has increased the financial returns for intelligent, concentrated effort. It has to a large extent eliminated the prestige of rich men's sons and ended the career of the 'Miss Nancy' type. Wideawake corporation managers know the evils of having too many sons and too many sons-in-law in their employ. For that reason they discriminate against official relatives, in favor of men without means, unencumbered by influence, who have their own way to make. From motives of self-interest alone, no corporation can recognize the 'pull basis' of making appointments."

Speaking of success, he said:

"Nothing so severely tests a man's character as success. Preliminary success is often fatal. It is a disastrous misfortune for a $1,000 man to secure a $10,000 position. There is no short cut to success without hard work, and to the extent to which your university course has tended to develop a character will your training result in success or failure.

"When the trust movement shall have steadied itself, when it shall have eradicated wrong tendencies and strengthened those elements which are right, then of the men in charge of great combinations will be required not alone an intimate knowledge of the business itself, but the training to be derived from a university course."

As to some evils of the consolidation craze, Mr. Dill said:

"Many amalgamations, formed ostentensibly for purposes of mutual protection, have accomplished little else than the unloading of blocks of indigestible securities upon a deceived public.

"Such combinations never had an excuse for existing, nor a chance of success, except as it was possible to suppress trade in a way thoroughly repugnant to American principles. A certain class, also, of the labor element is tending toward the suppression of production.

"Certain promoters, self-styled financiers, and certain labor leaders, have each made the same mistake, namely, that of attempting to extract for themselves more than their proportion of the prosperity of the county, by the suppression of the output of others, rather than by the increase of the results of their own labor. Mere organization, without due regard to the property and labor back of the organization, seems to be their plan of procedure; the acquisition of unearned wealth their aim."

Mr. Dill's references to the field for educated women was a feature of the address:

"Women's efforts in the direction of business enterprises will be valued wherever loyalty, faithfulness and intellectual alertness are appreciated. Women are not crowding out men; they are only making them bustle a little to hold their places. The struggle will be productive of far-reaching results. It is severe, interesting and suggestive, but the man who fails under it should not complain. If he respects his mother's memory he will take off his hat and thank God for the pluck of American womanhood.

"Much of the twentieth century history will be a recital of women's achievements. The period will mark the development of the educated woman's opportunity. It will offer her new chances, extend her usefulness and proclaim her distinction in the professions, as in every other sphere of life, where ability to see quickly and think deeply brings success.

"The man who contends that a woman cannot keep a secret displays ignorance of Wall street history. Many of the greatest financial and commercial secrets of the day are entrusted to women, who act as private secretaries for well known men, and the confidence is not misplaced.

"One man of national reputation allows a woman to answer much of his mail without even showing him the letters. To reach the private office of that dignitary, you have to first speak your little piece to this woman secretary, and if you get past her, it is because you have told your story in a straightforward way without beating around the bush. She is an expert in reading character, and the man who thinks he fools her soon appreciates his mistake. That woman can give points to thousands of men who think they are receiving a boy's wages for doing a man's work.

"During the past month a lady graduate of the Law School of the University of Michigan was appointed by Governor Taft an assistant attorney general for the United States in the Philippine islands.

"The American woman is none the less a lady because she adorns a profession, or becomes interested in commercial affairs. I honor her all the more for the splendid example she sets her sister in other lands, and for the grace, dignity, purity and faithfulness she contributes to the daily routine.

"Will it not be to the enduring credit of the American people that they have given the educated woman her best opportunity for extending her field of usefulness, regardless of the restrictions of hidebound tradition?"

The New Method of Treating Typhoid Fever. Benzoyl-Acetyl Peroxide, or Acetozone, as an Intestinal Antiseptic in Typhoid Fever.

(Therapeutic Gazette, March, 1903).

Frederick G. Harris, of Chicago reports 128 cases of typhoid treated in Cook County Hospital, Chicago, with acetozone. The cases first admitted seemed to indicate that the epidemic was of mild form, but later the disease proved to be of a severe type and complications were numerous. The author obtained the most satisfactory results with aqueous solutions of 15 grains to the quart, which the patients were urged to use very freely to quench the thirst, while in addition four to six fluid ounces of the solution were given every four hours as a therapeutic measuse. The movements of the bowels were regulated with sodium phosphate or magnesium sulphate.

The temperatures of the patients, on admission, were high, as a rule. In 117 cases under acetozone treatment the average duration of the fever was 18 days.

The number of recoveries was 117, or 91.4 per cent, while 11 patients died, a mortality of 8.59 per cent; statistics of the cases of typhoid fever in the same hospital (Cook County) not treated with acetozone show a death rate of 13.1 per cent. The author is of the opinion that under the acetozone treatment, in favorable cases, the duration of the disease was materially shortened and the most disagreeable symptoms were ameliorated. He declares that the characteristic fetor of the stools and the peculiar odor of the wards was greatly diminished; there was less stupor and delirium and less tympanites, and the usual diarrhoea was checked. An average of 138.12 grains of acetozone was used in each case. Finally he reaches the conclusion that when cases can be seen during the first week of the attack and large amounts of acetozone given, assisted by a gentle laxative, the temperature will return to the normal in from ten to twelve days.

Four cases of typhoid fever, in which acetozone was employed with satisfactory results, were reported by Charles Emil Brack of Baltimore (Medical Age, January 25). In each case the treatment consisted in the use of acetozone in solution. The first three patients, adults, received 30 grains of the drug per diem; the fourth, a child of 4 years, received 8 grains each 24 hours. Prompt recovery occurred in each case.

James Billingslea, of Baltimore (Atlanta Journal-Record of Medicine, February, 1903), reported 25 cases of typhoid fever treated with acetozone. The diagnosis was confirmed by board of health examinations. The treatment consisted of clearing the bowels thoroughly by means of calomel. Liquid diet was prescribed and cold or sponge baths were used as occasion required. The special treatment consisted in shaking 15 or 20 grains of acetozone powder with one quart of water, allowing the insoluble residue to subside. The patient was given the clear solution to drink freely, the whole amount of one quart being taken during twenty-four hours. The writer suggests that one part of the acetozone solution may be mixed with three parts of milk if thought desirable. The action of the acetozone will be materially aided by the use of a mild saline laxative.

He found that the feces soon lost their disagreeable odor by this treatment, and cold baths were required to a much less extent than with other treatment. Furthermore, the nurses universally affirmed that they found patients under this treatment easier to care for. No evil effects were noted from the use of acetozone.

A further contribution to this subject appears from the pen of J. J. Driscoll, of Chicago (The Kansas City Medical Index-Lancet, January, 1903), who relates his experience in six cases. He found that acetozone reduces the temperature, shortens the duration of the heart. The feces are completely dedisease materially, while it does not seem to have any ill effects on the odorized in 36 to 48 hours and tympanites rapidly disappears.

Medical Miscellany

Formalin and Blood-Poisoning.

Dr. W. H. Park, of the division of Bacteriology of the New York Health Department, has made a series of careful experiments on rabbits, which goes to show that in cases of septicemia the intravenous injection of formalin is not only useless, but has a deleterious action on the blood. The animals were inoculated with streptococcous material, and while the formalin did have some direct coagulating effect on the bacteria, it is also said to have caused more or less distintegration of the red blood-corpuscles. The practical outcome of the experiments was that, instead of increasing the resistance of the system to the operation of the bacteria, formalin actually lessened it, as was shown by the fact that the infected rabbits into which the solution was not injected lived longer than those subjected to the formalin test. On the same day that Dr. Park made known the results of his researches there died in Bellevue Hospital a patient with puerperal septicemia, in whose case the formalin treatment had been employed.—Boston Med. and Surg. Jour., cxlviii, No. 9.

Deaths from Contagion.

There have been four deaths from smallpox since January 1 in Minneapolis. One was in February, two were in March and the fourth this month. It is a fact vouched for by the health officials that, as smallpox becomes steadily less prevalent, it is attended with more fatalities. In the earlier stages of the now receding epidemic of smallpox, which began with the Spanish war, comparatively few cases were attended with fatal results; but as the disease has gradually been brought under control, it has become correspondingly malignant. In March last year, for instance, there were sixty-three cases in Minneapolis and no deaths, while with but thirty-eight cases for the same month this year there were two deaths.

"The wisdom of vaccination as a preventive," said Sanitary Inspector Luxton, "seems to have been pretty well demonstrated at Manila, which was one of the hot beds of small-pox when I was there during the Spanish war five years ago. With the strict enforcement of vaccination by the United States government, even at the cannon's mouth, the disease has steadily decreased in prevalence. In that city with a much larger population than Minneapolis and a less healthful climate, where thousands are constantly being vaccinated, there was not one fatality in March, where we had two deaths."—Minneapolis Journal.

After the removal of alcohol, Celerina, given in doses of from one-half to one ounce every four hours, is speedily followed by the most characteristic symptoms of improvement.

When a Man has a Cold.

When a man has a cold it is really surprising
The way that his friends try to straighten him out,
Their cures for the same confidently advising,
Each one calculated to put it to rout.
It's hard with so many sure things to be choosing
A remedy, home manufactured or sold,
But equally hard if you think of refusing
To try one: It's tough when a man has a cold!

To please my dear friends the most nauseous potions—
Decoctions of onions, the vilest of teas—
I think asafetida one of their notions—
I took just because I was anxious to please;
I've made myself stupid with brews alcoholic;
I've scalded my feet; in iced sheets I have rolled;
The lemons I've eaten have given me colic.
I tell you it's tough when a man has a cold.

My ears with the quinine I've taken are ringing,
I'm smelling of liniments rubbed on my chest;
Yet other new cures they're persistently bringing,
Until I just ache for a moment of rest.
I'm blistered and burned and I'm soggy with soaking,
I've swallowed more drugs than mere mortal can hold.
It isn't a matter for laughing or joking—
They're tough on a man, are these cures for a cold.

—Chicago News.

Owing to the great increase in the substitution of inferior and harmful remedies for those of well-known and proven value, we advise purchasers, for their protection, to insist on having **Celerina,** and not to accept anything that is offered as "just as good," or cheaper, which unscrupulous druggists continue to offer in order to make a few cents more. You know what you want, insist on having it; if he has not got it, go somewhere else, or get him to order it for you. We think this will explain to you the necessity of getting the genuine article, in order to produce satisfactory results, for in some cases of failure it has been owing to the substitution of an inferior article, thus not only doing you no good, but even imperilling your life. But as this hydra-headed monster, like Banquo's ghost, "will not down" as long as dishonest men exist, the best way to check it is to purchase in original packages and be sure that you get it in that form.

A Symposium On Modern Prostatic Investigation.

The entire issue of the "American Journal of Dermatology and Genito-Urinary Diseases," published at St. Louis, Mo., for May, 1903, will be devoted to a symposium on Modern Prostatic Investigation.

The leading surgeons of the World will take part in this work, which will be discussed, arranged and presented in a manner never before undertaken. The following subjects will be discussed: (1) To what extent occupation tends to prostatic hypertrophy with especial reference to active indoor, active out-door, and sedentary pursuits. (2) Which suffer oftenest, the phlegmatic or nervous, the lean or obese? (3) Etiology of prostatic hypertrophy. (4) To what extent the Cystoscope has been of

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MEDICAL DIAL

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To the Members of the Medical Profession—The Appointment of Assistant Surgeons in the Army—Severe Reflex pain.

JUL 22 1903

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The General Health

Hydroleine supplies the fat-food so necessary in the treatment of Consumption.

A pale, tired, feverish, coughing, sweating, thin patient, who has continued to lose flesh on plain cod-liver oil and its various mucilaginous compounds (called emulsions) will straightway right-about and gain flesh on Hydroleine—a pancreatized, predigested pure Norwegian cod-liver oil.

Hydroleine favors digestion and assimilation, increases flow of bile, checks the cough and steadily improves the general health.

Sold by druggists generally.

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undoubtedly meets the therapeutic indications in Hay Fever more fully than any other agent.

It controls the catarrhal inflammation as no other astringent can.

It allays the violent paroxysms of sneezing and profuse lacrimation.

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In ounce g.-s. vials.

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Adrenalin chloride (Takamine), 1 part
Normal sodium chloride solution (with 0.5% Chloretone), 1000 parts
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METHOD OF APPLICATION.

For use in Hay Fever *Solution Adrenalin Chloride* should be diluted with four or five times its volume of normal salt solution. It may be sprayed into the nose with a small hand atomizer or applied on a pledget of cotton, and a drop or two may be instilled into each eye to relieve the congestion and swelling of the lids. One or two applications daily usually afford complete relief.

In ounce g.-s. vials.

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STATE MEDICAL SOCIETY.

The thirty-fifth annual meeting of the Minnesota State Medical Society opened at the city hall in St. Paul on the 17th of June, the president, Dr. J. W. Andrews, of Mankato, in the chair. After reports were made by the executive committee, delegates to the American Medical Association meeting in May at New Orleans, and the treasurer, the president delivered his address, an excellent paper. The leading subject concerned the reorganization of the American Medical Association, which has been in progress during the past two years, and the organization of the various county societies of Minnesota for the past year, to bring them into harmony of action with the national association. The work so far accomplished was highly commended, and the future predicted to be full of promise for the good of the profession.

Some side issues were alluded to in the address, and among them regret expressed that the "Revised Medical Act" introduced in the legislature last winter failed to pass, and that the osteopathic bill became a law, having passed both houses and signed by the governor. It was deemed "class legislation" and a calamity to be deplored. Credit was given the legislature for passing the bill, with a small appropriation, to establish a tuberculosis sanitarium. It was advised to keep up the fight for the revised medical act, which is eminently fair for all medical healers and for the public good.

Among several recommendations of the president was one for the consolidation of the several medical journals of the state, the "merger" to be issued as the state medical journal in imitation of the American Journal now issued by the National Society.

On Thursday, the 18th, the main working day of the society, several excellent papers were read and discussed by the members. Among these one by Dr. A. W. Dunning, of St. Paul, attracted particular attention, partly perhaps on account of the recent acquittal of a man tried for murder in St. Paul because "he was drunk." Not knowing what the judge gave the jury as information as the law in his charge, there may have been some other reasons for the action of the jury; but it is hoped that other criminals and juries will not take advantage of the main fact as reported and "go do likewise."

Another paper by Dr. T. J. Catlin, of Delano, was of special interest, as it concerned a disease, influenza, of extensive prevalence, and which appears to be growing worse instead of better by age. It was discussed by the society, and all these papers will be printed in due time.

On Friday, the 19th, Dr. Charles L. Greene, of St. Paul, was elected president for the present year. For first vice president Dr. Charles Hills, of Pine Island; second vice president, Dr. Janette McLaren, of St. Paul; third vice president, Dr. W. R. Darling, of St. Peter. Dr. Thomas McDavitt, of St. Paul, was re-elected secretary, and Dr. R. J. Hill, of Minneapolis, was re-elected treasurer. Dr. W. A. Hall, of Minneapolis, was elected member of the house of delegates of the American Medical Association for two years; Dr. William Davis, of St. Paul, is a hold-over delegate. It was decided to meet in Minneapolis next year. The session closed with a smoke social at the Commercial club in the evening.

FLORENCE NIGHTINGALE.

Miss Florence Nightingale is the only survivor of the three founders of the Herbert Hospital at Woolwich, which the king and queen of England visited recently. In spite of the fact that a London newspaper published an obituary notice of "the late Miss Nightingale" a year or two ago, Miss Nightingale is still living at her house in Park lane, where she receives constant gifts of fruit and flowers, which remind her as she lies in bed or on her invalid chair that she is not forgotten. The name of Florence Nightingale, it is safe to say, never will be forgotten. She is the mother of the trained nurse, and the story of her heroic service on the battlefields of the Crimea will be an inspiration to women for all time. Sir Robert Rawlinson, the engineer sent out by the government to investigate the condition of the hospitals at Sebastopol and Scutari, declared that if the people of England could have seen these places they would have torn the government to pieces; but Florence Nightingale lived among these scenes by day and night, battling with disease which was killing men like flies. In those beds of fever and discomfort the Lady with the Lamp came like an angel from the skies. When the war was over some soldiers at a banquet in London were asked to write down the name which had most endeared itself to them in connection with it, and when the papers were collected there was only one name on them all—Florence Nightingale. Queen Victoria proposed her health in a toast, and the people of England gave her a fortune, which she gave them back again in the form of a training school for nurses.—Ex.

Anything concerning this distinguished and worthy woman will always prove acceptable to the reader, and especially so to physicians and nurses. In addition to the above notice we note the address of Dr. W. C. Cahill, of Germantown, Pa., to nurses, and published in the Philadelphia Medical Journal, June 13th, 1903. The doctor paid a high tribute to Miss Nightingale for her devotion to the sick and suffering, and to the education and elevation of character of nurses, as well as to the construction of hospitals and their administration.

Born in May, 1820, of wealthy English parents, at Florence, Italy, Miss Nightingale was carefully and thoroughly educated by her intelligent father, and she decided to devote her life to nursing the sick, and could not be diverted from her purpose. After thorough study and preparation in the hospitals of England, Scotland and France, she returned to England and took charge of the home for sick governesses in 1851. This institution had been nearly ruined by mismanagement: but Miss Nightingale was equal to the position, and in two years brought order out of confusion and the hospital back to prosperity. But her strength failed by overwork, and she returned to her country home for the benefit of her own health. Then in 1854 came the Crimean war, and her great opportunity; and again she was equal to the occasion. Although England had been fighting among themselves or neighbors almost continually, for more than a thousand years, they seemed as ill prepared for war in the Crimea as our army of the United States was at the outbreak of the civil "unpleasantness," and frequent blunders were made. It is said a whole consignment of boots were found to be for the left foot only; and a large number of mules, intended to convey goods to the army were actually delivered to the Russians instead of the English. It hardly seems credible that in the middle of the 19th century such mistakes, such cruelty and neglect of the soldiers could occur; but Kinglake, in his history of the invasion of the Crimea, describes the condition of the army, and his statements have not been disputed. He says: "On the last day of February, 1855, our army, out of a mean strength of 30,919 for the month, had lying in the hospitals no less than 13,608 men (and even that immense number is utterly insufficient to measure the evil which it partly discloses). Between the first of November, 1854, and the end of February, 1855, our soldiers perished in hospitals to the number of 8,898. In four months the dead and sick numbered 22,506, leaving but 11,367 effective men before Sebastopol." Great indignation was felt in England when these facts were revealed of the condition in the army. Demands were made for nurses, and the secretary of war, Mr. Sidney Herbert, wrote Miss Nightingale, begging her to organize a body of nurses to go to Scutari and take charge of the hospital, adding: "There is but one person in England, that I know of, who would be capable of organizing and superintending such a scheme. I would not conceal from you that upon your decision will depend the ultimate success or failure of the plan."

But Miss Nightingale had volunteered her services before receiving the letter from the secretary of war, and he announced her decision in a public letter and said: "Miss Nightingale, who has, I believe, greater practical experience of hospital administration and treatment than any other lady in this country, has, with a self devotion for which I have no words to express my gratitude, undertaken this noble and arduous work." Out of a large number of nurses offered, Miss Nightingale selected 38, and within seven days started for Constantinople, and arrived on the day of the battle of Inkerman, "cheerful and pleasant, neatly attired in black, a strong contrast to the usual aspect of hospital attendants, and, oh, how welcome!" The task before her is thus described by Dr. Cahill: "Work in plenty was awaiting them. The general hospital at Scutari was an immense affair. On the floors of several stories, along the corridors, overflowing to the open galleries, stretched four miles of mattresses, and on each mattress lay a wounded or sick soldier; and there were 38 trained nurses. But more than the overcrowding, dirt, partly cooked food and unwashed bedding added to the intolerable condition of the soldiers with wounds, with frost bites, with scurvy, with cholera, with dysentery, with camp fever, lying indiscriminately together." In this state of things order must be established, and this required tact, as she was opposed at first by some of the officers and medical men through prejudice against female nurses; but these as well as the sick soon hailed her presence with gladness. Although a lover of law and order, and a good disciplinarian, when necessity required she could brush red tape aside as a cobweb. The proper preparation of food received her attention. Their method had been to tie the meat and vegetables separately in nets and boil them together in large copper kettles; the result of such cooking may be imagined; some portions were boiled to shreds, and some only partly cooked. But, it is said, that in ten days the kitchen was in order, so that thousands were supplied with properly prepared food and attractively served. A laundry was established and clean bedding replaced the soiled. Great and sudden was the change in the sick and wounded. The mortality decreased rapidly, and the spirits of the soldiers revived. One of the patients wrote home: "To see her (Miss Nightingale) is happiness; she would speak to one and nod and smile to many more, but she could not do it to all, you know; we lay there by hundreds, but we could kiss her shadow as it fell and lay our heads upon the pillow again content."

Dr. Cahill quotes from Longfellow this exquisite tribute to the incident alluded to above:

"So in that house of misery,
A lady with a lamp I see
Pass through the glimmering gloom
And flit from room to room."

"And slowly as in a dream of bliss,
The speechless sufferer turns to kiss
Her shadow as it falls
Upon the darkening walls."

"A lady with a lamp shall stand,
In the great history of the land,
A noble type of good
Heroic womanhood."

Such work and such surroundings must surely affect the health of all nurses. Miss Nightingale had the Crimean fever, and nearly lost her life; four of her faithful nurses died. On her partial recovery and return to England she received the queen's decoration, a gift from the sultan of Turkey, and the eloquent eulogies of parliament. A fund of $200,000 was raised and offered her as a testimonial; but she declined all pay for services, and the money was finally used to found an institute for training nurses, under the supervision of Miss Nightingale. St. Thomas' Hospital and King's College Hospital were selected as the places of training and instruction. The instruction was finally centered mostly at St. Thomas' Hospital and the Nightingale Home of Nurses, where the probationers live, is established there.

Miss Nightingale has published "The Institution at Kaiserswerth on the Rhine" (1850), "Notes on Nursing" (1850), "Notes on Hospitals" (1859), "Observations on the Sanitary State of the Army in India" (1863), "Notes on Lying-in Institutions" (1871), and "Life and Death in India" (1874).

RADICA AND NORDICA.

A New York medical journal recently reported the recovery of Radica, the living half of the Hindoo twins, separated by Dr. Dogen, of Paris, about two years ago, and mentioned at the time in The Dial. The report alluded to said that Radica had returned to Paris from Riviera, fully recovered, both from the operation and threatened phthisis. Some nuns had adopted her and placed her in an orphanage in the Latin quarter of the city. It will be remembered that the other twin, Nordica, although at the time of separation, and for some days after, appeared in the best condition of the two to survive, died soon of tuberculous disease.

Later: It is now, June 14th, reported from Paris that Radica is dying at the home of the Dames du Calvaire, and surgeons are deeply disappointed. For a year after the separation Radica was thought to be gaining in strength; but symptoms of tuberculosis have been discovered and the disease has progressed so rapidly that there is now no expectation of the girl's recovery.

It is said that Radica does not know that her sister is dead. She asks for her and can only be consoled when the attendants tell her that her sister has gone to a summer climate. The twins were for some time exhibited at Barnum & Bailey's circus, and have attracted wide attention among doctors.

The New York Medical Journal and the Philadelphia Medical Journal have consolidated. This should result in greater efficiency and greater economy. Both journals have enjoyed a very high standing in the profession. and now that they are united we have no doubt their power for good will be greatly enhanced.

Original Articles

STEPS UPWARD IN MODERN SURGERY.

A Retrospect.

By Franklin Staples, M. D., Winona, Minn.

There is interest and profit in studying the works and achievements of the past, and this more especially in matters which directly concern us. In a review of the history of surgery in the last century certain events, discoveries and developments appear which show their relations and importance in the science and practical work of today. In taking account of advancements made, the value of many early works and beginnings should not be overlooked. It may not be to the discredit of surgeons of an earlier day that their good works stopped short of the accomplishments of the present time. Any correct notice of the surgeons, their works, and especially of the means of then and now, might serve to place the credit quite otherwise than has been imagined. When, for instance, in 1809, Ephraim McDowell, in a farm house on a lone country road in Kentucky, with the surgical means then available, without anesthesia, performed successfully the first ovariotomy; or when, a little later, with conditions but little changed, Valentine Mott, of New York, was doing his fine surgery on the larger blood vessels, and other able men in different parts were doing foundation work in American surgery. Good and lasting results came from praiseworthy works, and the fact that these were gained notwithstanding the want of what are now seen as the greater facilities, was of itself an element of credit.

Anesthesia in Surgery.

Any historical mention of this subject generally brings up the old question of discovery and introduction. We may, however, leave this for the time with but a word. The credit of the name, anesthesia, is given in Park's history to Oliver Wendell Holmes. He is said to have suggested it to Morton, who was the leading claimant for the honor of discovery. It was Holmes also who proposed a novel way of settling the fierce contest for the greatly coveted honor. The plan as given by him is reported as follows: "All the friends should unite in erecting a single memorial, with a central group symbolizing painless surgery, a statue of each of the principal claimants standing on opposite sides, and with the inscription beneath: **"To E(i)ther."**

The advent of the present anesthesia into the domain of practical surgery was at the time the most important event in its history. Aside from its great benefit in relieving suffering, it proved to be of incalculable advantage not only in rendering the finer operative surgery possible on all parts of the body, but in enabling the necessary good work to be carried to parts before inaccessible. Deep exploratory incisions were made practicable and justifiable, and in this the later and present operations in abdominal, thoracic and brain surgery had their beginning. Under good anesthesia all operations can be done with greater carefulness and precision than by the best skill without it. This advance came in time to aid the change from the old circular, single sweep amputation, with its protracted healing by granulation, and its faulty stump, to the better method of flap operation with union by "first intention;" which, with good asepsis, is without suppuration. The old fashioned, curved amputating knives were consigned to their last resting place in the surgical museum. Surgeons now have the extra advantage of pure material for use in anesthesia. The articles principally in use, sulphuric ether and chloroform, are furnished by manufacturers not only in good form and quality, but are put up in a manner designed to preserve them. Ether, because of its volatile character, must be kept and administered with as little mixture as possible with the atmosphere—chloroform must not receive the direct rays of sunlight through glass bottles, which decompose it and render it not only useless but harmful.

The coming of modern anesthesia to the aid of operative surgery marked an era in the history of its progress. Park, in his Epitome of History, in speaking of asepsis and anesthesia in surgery, has the following. He says: "First of all, they are the two grandest medical discoveries of all time; and, second, they are of Anglo-Saxon origin—the one British, the other American. To the introduction of anesthetics and antiseptics is due a complete revolution of earlier methods, complete reversal of mortuary statistics, and the complete relief from pain during surgical operations; in other words, to these two discoveries the human race owes more of prolongation of life and relief from suffering than can ever be estimated or formulated in words."

Asepsis in Surgery.

It was as late as near the middle of the last century when the practical means of modern asepsis in medicine and surgery were brought into general use. Any previous local undertakings afforded but slight indications of what was to come. But when reform movements were once inaugurated, but little time was required for the advantages of aseptic cleanliness to be understood both by profession and people, and for the general adoption of its means and methods; this especially in operative surgery. The practical knowledge of the means of asepsis in surgery and of what pertained to it came to be the moving and directing power in great reforms in the ways of surgical work. It revolutionized the construction, furnishing and care of hospitals and operating rooms caused the manufacture and use of new and different hospital supplies, was a means of higher practical education to surgeons and nurses, and made the accommodations and means of restoration in due time to become attractive not only to the invalid, but to the minds of the people at large. From reasons apparent, the surgical hospital lost its former reputation for impure air and disease infection, and became known as a place for successful surgery far surpassing any of private homes, and is now intelligently chosen in preference to the latter.

Orthopedic Surgery.

Of the departments in medicine and surgery which gradually came into existence principally in the latter half of the past century none has come to be of greater importance than that of orthopedic surgery. The word, orthopedic, has a peculiar but not inappropriate significance—from two Greek words meaning straight and child—a **straight child.** Some have preferred to find the meaning of the latter word in the English term, foot—**straight foot.** Either will do. In passing, the names and works of a few pioneers in the department may have notice. Dr. Detmold, a distinguished German surgeon of New York, was an early instructor and practitioner in orthopedics. He taught especially concerning the operative measures for the different forms of talipes. He is said to have imported the practice from Germany. Detmold had the credit of having introduced the practice of subcutaneous myotomy some time before tenotomy had come into practice in the treatment of deformities. It had long been known that the severed parts of a muscle would readily unite, provided that the division and adjustment be properly done, but that the same would hold good for divided tendons was not as well understood. The important facts were known later that the ends of the fibrous tendon, when carefully divided within the sheath, would draw apart and the space between them within the still connected sheath being filled by an affusion of plastic material, union would take place with the strong tendon entire and lengthened rather than destroyed.

At the time Dr. Detmold was doing his work in New York Dr. David Prince, of Illinois, had begun his work as a practitioner and teacher of orthopedics. He established his clinical hospital at Jacksonville, Ill., and there practiced and taught in the special direction of orthopedic surgery for many years. His work entitled "Plastics and Orthopedics" was published in 1871. It was the embodiment of three reports made by the author to the Illinois State Medical Society in the years 1864, 1867 and 1871. The influence of the work of Dr. Prince did much to advance the interests of this department of surgery during the time of its early history in this country. Another pioneer in the department was Dr. Louis Bauer, of Brooklyn, New York. The establishment of the Medical and Surgical Institute in Brooklyn, early in the fifties, was largely the work of Dr. Bauer. The excellent work of Dr. Bauer, entitled "Lectures on Orthopedic Surgery," was published in 1865, and was made from lectures delivered at the Brooklyn institute. The later years of the life and service of Dr. Bauer were spent in the city of St. Louis. He was dean of the faculty of the College of Physicians and Surgeons of that city, continued his work of instruction in orthopedic surgery and caused an increased interest to be felt in this department of surgery in the profession of the west.

The important part taken by the late Dr. Lewis A. Sayre, of New York, in building up the department of orthopedic surgery is known to the profession of this country. Dr. Sayre's work in this direction began to be known about the time of the opening of Bellevue Hospital Medical College of New York, in 1861. He was one of the founders of this college, and was made professor of orthopedic surgery for the college at the beginning. In this the Bellevue College was among the first, if not actually the first, teaching institution in the country to establish for itself a department of orthopedics. The advance in this direction since that time has been marvelous. It is now the rule for all medical colleges to give this an important place in their courses of instruction and to have established departments of the same. Dr. Sayre's excellent work, entitled "Lectures on Orthopedic Surgery and Diseases of the Joints," resulted from his work of instruction in the early years of the life of the college, and was given to the profession in its present form in 1883.

The men whose names and early works are mentioned here were not altogether alone, but were prominent among the founders and early teachers of orthopedic surgery in this country. Study and practical work in all that pertains to this department of surgery have had the effect to improve the means and work in other departments: notably in various improved forms of apparatus and methods of treating certain fractures and dislocations; but not alone in these.

Anesthesia, asepsis and orthopedics as a department are given, together with certain important aids to advancement in connection with their discovery and developments, as signal examples of steps upward in the progress of surgery in the last half century. Other both major and minor events and departures have had their place. The physician and surgeon of today may study with satisfaction and with educational advantage the ways and means of past progress, and, while rejoicing in the worthy works and possessions of the present, may himself be in preparation for doing his part for the wealth of science and art in medicine and surgery yet to come.

INFLUENZA.

T. J. Catlin, M. D.

The laity, and some doctors of medicine, seem to think that influenza is a new disease, and one of little consequence. It is often said of the sick: "Oh, he has the influenza or the grippe; he will be out again in a few days." But the sooner the public and the professional mind is disabused of the idea that influenza is a new thing, or that it is a harmless disease, the better for the public health, and for the reputation of the practitioner. For centuries past articles have been written, under different titles, describing epidemics, some of them quite fatal, of what is now known as influenza or la grippe. The descriptions of influenza in medical books of fifty years ago compares favorably with those of the present time. And the preacher has said: "And there is no new thing under the sun." As for the fatality of influenza, one has but to read the reports on vital statistics of the last few months in several of the states of the union; or, possibly, turn to the record of cases treated by himself, to be satisfied that not all who get grippe get well again.

Influenza is an epidemic; when it makes its appearance in a community there are usually enough cases to make plain that fact. It has been with the human race, according to some authorities, since 400 B. C., and has appeared at numerous times, in different places, in diverse forms and accompanied with an ever varying fatality. The epidemic prevailing in this country during the past winter and spring has caused more than the usual number of deaths. Since 1890, at least, the disease has, with now and then a few months' intermission, been with us in Minnesota. It has appeared in different forms, at different times, and even in the same epidemic. But continues the same old grippe.

The cause of the disease was formerly thought to be influence of the stars; but more recently has been attributed to the bacillus of influenza, described by Pfeiffer in 1892. It was long claimed to come from the east; but now to travel in different directions.

The symptoms of influenza are more numerous and protean than those of any other acute disease. Its onset is usually sudden and severe. The well quickly become sick, and very sick. The pulse is rapid, temperature high and respirations hurried, perhaps with dyspnoea. There may be chills or rigors, with the skin moist or dry. The tongue is coated, appetite gone, and there may be nausea and vomiting. Constipation is the rule, but diarrhoea is often a symptom. Headache, vertigo and even delirium may exist, while epistaxis is of frequent occurrence. Coryza, sneezing, lachrymation, hoarseness, cough, sore throat, may any, or all, be symptoms. Pains in the left hypochondriac region are frequently troublesome, as also are those in the neck, chest, back and limbs, and there is a feeling of general soreness, described by the patient as, "I feel as if I had been pounded all over." Earache and inflammation of the eyes occur. Skin eruptions are frequent symptoms, from the flea bite red spot to a similarity to scarlet fever, measles and a mottled or marbled appearance over the body. Swelling over the eyebrows has been noticed. The patient feels very weak and is apt to be despondent.

From the enumeration of symptoms it might be conjectured that a diagnosis is very difficult to make, but to the experienced such is not the case. There is usually so many cases alike at the same time, and such a profusion of symptoms, simulating several severe diseases, that it is an easy matter to name influenza. In typical cases the symptoms in from two to seven days disappear; by lysis rather than by crisis, leaving the patient weak. Once having influenza is no preventative against another attack, and relapses are not uncommon.

The prognosis in uncomplicated cases is favorable, except in the young, the old and the feeble; and, I think, when we have complications they are due, generally, to diseases existing or tending to exist before the attack of influenza, rather than to new diseases. People suffering with catarrh of the upper air passages are apt to suffer more from influenza in the same localities, while those having heart, lung or bowel troubles when influenza attacks them find the previous ailments made worse.

The treatment of influenza is nearly as badly mixed as are the symptoms. But it has been fairly well learned that rest, tonics and time work speedier and more perfectly cures than do the depletory and antiphlogistic remedies. It may be advisable at the beginning of the sickness to administer a dose of calomel to move the bowels, and to follow it with tonic doses of quinine. If the fever persists in remaining above 103 a few small doses of aconite may be of assistance. But frequent sponging with water in which may be salt, or alcohol, and of a temperature most agreeable to the patient, seems to work better. If cough is troublesome, and pains complained of, and the patient restless, small doses of Tully's powder or bromide of potash has a good effect. Chlorate of potash or other mouth wash is pleasing to the patient. Milk, eggs and broths should be given regularly and often. Patients who go to bed as soon as attacked, and remain there till the symptoms abate, do best.

(Read before the medical section of the 35th annual session of the Minnesota Medical Society, June 18, 1903, at St. Paul.)

PRACTICAL EXPERIMENTS IN THE TREATMENT OF ANEMIC CONDITIONS.

By Fritz Euler-Rolle, M. D., of Vienna.

In the following I desire to describe in some detail the action of an iron preparation which, owing to its great advantages, deserves a permanent place in our materia medica. The preparation referred to is Pepto-Mangan (Gude), which unites in a fortunate manner those qualities which we have a right to demand of a ferruginous remedy. In the first place it contains besides iron a second constituent of importance in the formation of blood, namely, manganese; and, secondly, both of these are present in a neutral solution, which is the more to be valued since because of this fact it disturbs neither the gastric nor the intestinal functions. For this reason we are enabled to submit every case of chlorosis at once to ferruginous treatment, irrespective of the condition of the gastro-intestinal tract. Other authors have called attention to this advantage. Heitzmann emphasizes particularly how well the preparation is tolerated and that, unlike other chalybeates, it does not have an injurious influence upon the digestive organs, but even increases the appetite.

Ripperger considers the preparation as a very useful and easily assimilated remedy, free from any disturbing effect upon the digestive tract.

In my own experiments with Pepto Mangan (Gude) I have exceeded the limits of its indications hitherto maintained, inasmuch as I became convinced that this preparation should not be confined especially to cases of chlorosis and anemia, but would effect improvement in other diseases attended with weakness and exhaustion, or at least maintain the nutrition of the patient, since the peptone which it contains acts as a nutrient and deserves consideration. On this point of view I based the first series of experiments, consisting of 11 cases, in which the general result was very satisfactory. These comprise 1 case of tabes with gastric crises, 1 case of obstinate vomiting in pregnancy, 1 case of esophageal cancer with severe stenosis, 4 cases of diabetes mellitus of slight degree, 3 cases of the uric acid diathesis with arthritis, and, finally, 1 case of leukemia. The second series of observations related especially to cases of chlorosis and secondary anemia, the latter comprising 14 cases, so that altogether .25 experiments were made.

In the following I have made a selection from this number, and almost every case illustrates the remarkable value of the preparation.

J. P., aged 33 years, butcher's assistant, consulted me June 2, complaining of constant vomiting and very violent colicky pains which occurred soon after taking food of any kind. The vomited matter contained almost always the entire food ingested, and on one occasion a moderate quantity of black coagulated blood. Pressure upon the stomach was quite painful. The diagnosis of ulcer of the stomach, to which the symptoms pointed, was discarded after a more thorough examination revealed symptoms characteristic of a tabes dorsalis. The patient within a short time had become markedly emaciated, having lost eight kilos in weight. He had acquired syphilis 12 years previously during his military service. The attacks affecting the stomach therefore proved to be gastric crises. After they had diminished in frequency and intensity under the use of hot poultices and strict diet, Pepto-Mangan (Gude) was prescribed at the beginning of July. At first three tablespoonsful were given daily, added to milk, and later, when it was found that the preparation was well tolerated, it was increased to six tablespoonfuls. After the sensitiveness of the stomach had gradually subsided the patient could be discharged from treatment in the middle of August, having regained his weight with the exception of a trifle, while the crises had completely ceased.

In the case of uncontrollable vomiting in an anemic woman, 24 years old, during her first pregnancy, pepto-mangan was administered in the quantity of three tablespoonfuls daily, to which were added small amounts of cold milk. Hot applications with the thermophor were also employed. After less than four weeks the patient was discharged from treatment, improved, without any loss of weight.

I am able also to report two cases of diseases of the metabolism, namely, one of diabetes mellitus of moderate degree and one of uric acid diathesis. The subject of the former was a man 46 years old, who since two and one-half years had constantly excreted a variable quantity of sugar in the urine. He stated that while the amount at first was only 0.7 per cent, it had increased and finally reached 3.21 per cent. After being placed on exclusive animal diet there was always a gradual subsidence of the glycosuria, the sugar disappearing completely from the urine after about 14 days. In the course of time, however, he acquired an unconquerable repugnance toward any form of animal food, and the supply of albumen could only be augmented by the addition of nutritive preparations to milk, of which he took about a quart daily. Gude's Pepto-Mangan was administered regularly in quantities up to 6 tablespoonfuls daily, chiefly to relieve the marked anemia present, which it did excellently. Inasmuch as this preparation supplies not only iron and manganese, but also peptones to the organism, the patient could be maintained in a vigorous condition during six weeks.

Another patient, 58 years old, who had suffered since four years with arthritis urica, had passed three months previously through an acute gouty attack, which yielded to iodide of potassium, the former attacks having been relieved by the salicylates. The diet, which had always been somewhat abundant, was thoroughly regulated, and for a long time the patient took meat only at his midday meals, with the proportionate addition of green vegetables and some fruit, while his breakfast consisted of coffee with milk or thin cocoa, with two tablespoonfuls of pepto-mangan, and a roll, and his supper of butter, eggs, etc., and two tablespoonfuls of pepto-mangan. No recurrence of the acute gouty attack has taken place after a lapse of five months, and subjectively also the patient feels well under this regimen.

Although from the cases cited above we are able to form a decision as to the action of this remedy, it may be further added that it fulfills its purpose in the majority of instances; for, aside from a marked case of phthisis with intestinal ulcers and amyloid changes in the internal organs, in which the profuse diarrhoea was increased by the administration of the iron preparation, which therefore had soon to be discontinued, and aside from a case of severe diabetes, a considerable improvement in the general health of the patient could always be demonstrated clinically by determinations of the bodily weight, by the condition of the gastro-intestinal tract, and by microscopical examinations of the blood. The increase of the diarrhoea in the above cases is attributable, in my opinion, perhaps to the too large quantity of the pepto-mangan administered. It is well known that all peptones and albumoses stimulate more or less the mucous membrane of the intestine, and therefore may give rise to frequent fluid evacuations. This is best avoided by keeping the daily and single doses within certain limits and not increasing them too rapidly. On the other hand, this property of the preparation can be utilized therapeutically, especially in cases attended with habitual and chronic constipation, particularly in chlorotic girls, in which the iron administered enhances the existing sluggishness of the bowels, as well as in neurasthenia and similar conditions.

Inasmuch as in pepto-mangan the nucleins are completely absent, it acts as a valuable auxiliary in the treatment of the uric acid diathesis, since, according to Kossel, all nucleins have the effect of increasing the formation of uric acid. Moreover, it is entirely free from extractive matters. While the latter ordinarily constitute a very agreeable addition to the diet, and their increased ingestion is desirable in some cases, on the other hand their effect is the more injurious in various diseases, especially those of the kidneys.

If up to now I have described only cases which are intended to illustrate the utility of the preparation even in desperate conditions, I have done so in order to point out that in cases apparently beyond medical aid, and in others in which we despair of success, we should not stand by inactive. Thus, for example, in the above case of diabetes it was a matter of great importance that we were able by means of pepto-mangan to raise his nutrition, which, in consequence of his repugnance toward a meat diet, had become greatly reduced and was accompanied by pronounced anemia, to such a level that for a comparatively long period of time the patient was able to get along without any large consumption of meats.

What further incited me to report these cases was that the experiments so far made with pepto-mangan have been restricted, for the most part, to the field of iron preparations, of which an article by Dr. Roen affords us a very comprehensive view. This author remarks very justly that most of the ferruginous preparations hitherto manufactured consist of albuminous material held in solution by an excessive amount of caustic soda, thus neutralizing the gastric juice, while, on the other hand, through their decomposition the irritating chloride of iron is produced; or they represent peptone combinations containing an excessive amount of mineral acids, and therefore are precipitated by the alkaline intestinal secretion and rendered less assimilable.

Pepto-mangan does not share in these disadvantages, and, moreover, owing to the presence of manganese, that excellent carrier of oxygen, is of the greatest value, especially in chlorosis, anemia, and allied conditions.

I take the liberty of reporting only two more cases from the remaining 14, both relating to chlorosis characterized by severe symptoms, and illustrating very graphically the prompt action of this chalybeate.

The first case was that of a girl, 18 years old, who presented a well developed type of marked chlorosis. There was marked anemia of the general integument; the mucous membranes were very pale, and she suffered since the last fourteen days with persistent headache and buzzing in the head. This was accompanied by palpitation and a feeling of weakness, as well as pronounced edema of the lower extremities up to the middle of the leg. Her menstruation was very irregular and profuse. Examination of the blood showed a much reduced color index, 20 according to Fleischl's method. The number of red blood cells was reduced to 3,100,000, the white not being materially increased. Although the patient had taken the greatest variety of iron preparations, they were not well tolerated. I therefore decided to administer Pepto-Mangan (Gude), enjoining at the same time rest in bed, which seemed indicated, if for no other reason than that of the condition of the heart and the attacks of weakness. The patient received at first two tablespoonfuls and after a few days three tablespoonfuls of the pepto-mangan, and this amount in the third week was increased to five tablespoonfuls daily. The effect was truly surprising; without the least disturbance of the gastro-intestinal tract, considerable improvement of her entire condition had occurred at the end of four weeks, so that she was able to be up and about. She had a good appetite and menstruation was regular for the first time in months, while the cardiac palpitation, headache and buzzing in the head, as well as the edema, had vanished. Examination of the blood showed 3,980,000 red blood corpuscles and a hemoglobin percentage of 50 (Fleischl). After another four weeks the patient was completely restored to health, with a hemoglobin percentage of 70 and an increase in the number of red blood cells to 4,200,000.

In conclusion I would add that during the administration of the pepto-mangan no unpleasant by-effects have been observed, and that the preparation has always been willingly taken.

Medical Miscellany

TO THE MEMBERS OF THE MEDICAL PROFESSION.

At a conference of the officers and Advisory Committee of the American Congress on Tuberculosis, held in New Orleans, May 7, some important changes were made in the plans as previously announced.

The previous plans of the Council to hold the Congress in St. Louis, in 1904, were changed, many considerations favoring Washington, D. C., as the place of meeting. A change of time of meeting was also made to April 4th, 5th and 6th, 1905.

As there is to be an International Congress of Tuberculosis, at Paris, in 1904, it was deemed possible that some foreign delegates might be prevented from attending the Washington meeting on that account. The plan and scope of the American Congress being in reality international, the postponement of the meeting to the spring of 1905 will give the management ample time for perfecting details upon which the success of a Congress largely depends.

One committee has been already arranged to have charge of the Section of Pathology and Bacteriology, as follows: Dr. Simon Flexner, chairman; Dr. William H. Welch, Dr. George J. Adami, Dr. Theobald Smith, and Dr. F. F. Wesbrook. Committees in charge of other sections or departments will be announced later.

Dr. George Brown, of Atlanta, Ga., is practically the Executive Officer of the Congress, and all who desire to present papers before the Congress should apply to him. As there seems still to be a doubt in the minds of many physicians concerning the result of the vote of the New York meeting, which in 1902 adopted a new and definite plan for the next Congress, we beg to assure our readers that the new plan is being followed in both letter and spirit by Dr. Brown and the other officers elected at that meeting.

Any circulars or communications purporting to be in the interests of the American Congress on Tuberculosis, which do not appear over the name of Dr. George Brown, as Secretary, do not relate to the Congress which was arranged last year, and the organization of which has already so far advanced as to insure its success from every point of view.

DANIEL LEWIS, M. D.,
President.
The American Congress on Tuberculosis.

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THE APPOINTMENT OF ASSISTANT SURGEONS IN THE ARMY.

The difficulty of obtaining young men graduates of medical colleges who are able to pass the examination for appointment as assistant surgeons in the army must, sooner or later, engage the attention of the authorities. Surgeon General O'Reilly has a plan in contemplation which he hopes to see realized before he finishes his term of office. It is his idea to take graduates and, after examining them as to their general qualifications, admit them to the Army Medical School in Washington and give them a training in special branches for a year or more, subjecting them to examinations as they progress, and at the end of the term select from among them those who are deemed competent to fill the vacancies in the medical corps. Such as do not find a place in the regular establishment would be of use in the national guard organizations, which latter will be benefited by having available young men who are specially trained in military medicine and surgery, hygiene and sanitation. In this way the state troops would have at their bidding surgeons who have a practical knowledge of their military as well as professional duties. Surgeon-General O'Reilly is also in favor of requiring that the young men who enter the medical department after this preliminary education shall be required to serve at least five years.—Army and Navy Register.

FOR THE DIAL.

The skull of Oliver Cromwell is shown in the London Museum. "It is exceedingly small," said an observer, one day. "Oh," said the ready guide, "this is his skull when he was a little boy."

An observer of the famous Siamese twins remarked that it was exceedingly fortunate they were brothers. It would have been very embarrassing if two strangers had been joined in that way.

SEVERE REFLEX PAIN.

J. H. Tilden, M. D., of Denver, in the June number of the Chicago Medical Times, in an article advocating the use of tampons in gynaecological practice, reports, among others, a case which was characterized by severe reflex symptoms and which had not yielded to the treatment accorded by two other practitioners. Dr. Tilden's procedure was, the introduction of a glycerine tampon and the administration of antikamnia in ten grain doses (two five-grain tablets) to relieve the pain. The tampon was removed each night at bedtime and followed with hot water injections. The patient on being discharged, remarked, that since following this treatment she could run the sewing machine without the usual pain and tired feeling.

Celerina is a powerful stimulant without the depressing after-effects of alcohol, caffeine, nitro-glycerine, etc. It is also a reliable nerve tonic. A pleasant exhilaration is experienced after a dose of one or more teaspoonfuls, and under its continued use a renewed capacity for mental and physical exertion results. It is indicated in all forms of exhaustion, mental inertia and senile weakness.

FLAT AND SHARP.

Place, restaurant: Flat—Here, waiter, I found a hair in the honey.

Sharp—I do not understand how that could be, the honey was combed.

Flat—(tried again)—Here is a hair in the ice.

Sharp—How could that happen, when the ice was shaved?

Not quite subdued, Flat made one more attempt to be smart. "Here," he said, "is a hair in the baked apple."

Sharp—That is remarkable, for the apple is a Baldwin.

A New Anaesthetic.

At the meeting of the French Academy of Medicine, held on March 17, M. Courtade gave an account of a new local anæsthetic. It is para-amido-benzoin ether, and has been named anesthesine. It is a derivative of orthoform, and is but slightly soluble in water, but freely so in glycerine and in fatty bodies. It is not poisonous, which gives it a great advantage over cocaine, while its action is much less transitory than that drug. M. Courtade has used the drug especially in cases of patients suffering from tuberculosis or syphilitic ulceration of the pharynx, which rendered swallowing very painful, or even impossible. After an application of anesthesine in powder they were able to swallow without pain.—The Lancet.

Urates.

Young lady reading report of urinary examination: "Doctor, what are urates?" Doctor: "Five dollars per visit."

Old Methods of Treatment Which Are Not Necessarily Obsolete.

H. W. Syers decries the use of so-called hypnotics and an ipyretics in the treatment of fevers, to the neglect of opium. This he considers the most reliable and the safest and most satisfactory drug in these cases. The antiseptic treatment of the alimentary canal in typhoid fever he believes to be as hopeless a proceeding as to undertake to empty the Thames with a tablespoon. Mere reduction of the temperature is of little value, and has a deleterious influence on the circulation. Ice packing gives too great a shock. In many cases of perityphlitis, in which there is no evidence of suppuration, medical measures should be preferred to surgical. The tendency to discard the use of opium, he thinks, is simply disastrous, and the foolish view that it should be denied must inevitably lead to a large number of cases being operated upon when such a procedure might easily have been avoided. In chronic renal disease, too, opium should not be denied. Bleeding in many diseases should be restored to favor; wet or dry cupping and flying blisters have their place in therapeutics. There is danger of overdoing the open-air treatment and the overfeeding practiced in phthisis, and there is the greatest possible danger in the craze for the treatment of heart disease by baths and exercise. Gout can be better treated by the resin of guaiacum given in cachets than by modern methods founded on the uric-acid theory, the same drug being effective in rheumatism. The author would also call attention to the value of stimulating liniments in the joint affections of these diseases. Free purgation is less used than formerly in all cases, and in these days of self-indulgence and overfeeding this is a mistake. The author believes that there will be a reaction in favor of many of the methods of treatment which are at present considered obsolete.—Treatment, February, 1903.

On the Use of Citric Acid in Uterine Hemorrhage.

The Lancet, March 14, contains the following: "In No. 8 of the present volume we give an abstract of a paper read on this subject at the Royal Academy of Medicine, on January 13. Dr. Macleod, considering the introduction of a lemon into the cavity of the uterus to be a novel, not to say an ingenious procedure, submitted it to the notice of the Westminster Medical Society, for the purpose, we suppose, of eliciting the opinions of the persons present respecting it. A discussion ensued: Dr. Granville expressed himself as opposed to the remedy, considering it to be unsafe and ineffectual, Some gentlemen conceived that there would be great difficulty in getting the lemon out. It might be introduced easily enough, but how was it to be extracted? A silence followed: the question was so important that it required the most serious deliberation, and such it received. With the greatest imaginable gravity, and with the air of one 'profoundly skilled in analytick,' Dr. Copeland arose—Dr. Copeland, physician to the Queen's Lying-in Hospital, cum multis aliis honoribus—modestly suggested 'that a small bit of string should be fastened to the extremity of the decorticated lemon, by the aid of which it might be safely withdrawn!' This suggestion was excellent; it dissipated all doubt and difficulty; it was a very quod erat demonstrandum of the question, and the society testified their approbation by great laughter and applause."

Knife-blade In the Ear.

J. C. Thompson reports the case of a man of twenty-seven years who had a bloody and purulent discharge from the right ear for seven weeks. Examination showed a mass of exuberant granulations in the meatus, bathed in a bloody pus. A probe passed through the speculum to press these granulations out of the way encountered a hard, foreign substance, which felt like a piece of steel. After part of the granulations were curetted away a black substance could be seen in the external meatus. It was grasped with forceps and an attempt made to remove it, when it was found to be so firmly fixed that it could not be withdrawn. A hook passed behind it failed to dislodge the foreign body. Examination was then made behind and below the ear, and a foreign substance extending down an inch into the tissues of the neck could be plainly felt. When the projecting portion in the ear was moved by the forceps the portion in the neck could be seen and felt to move. Further questioning revealed the fact that the man had been stabbed two years previously. Under local anæsthesia through an incision behind the ear, there was removed a broken knife-blade more than an inch in length and of the usual width. The part projecting into the ear is very much corroded. That buried in the deeper tissues of the neck, while blackened, showed little signs of oxidation. It lay below the deep cervical fascia, and was partly imbedded in the fibers of the sternomastoid muscle.—Cincinnati Lancet-Clinic.

Successful Removal of 265 Centimeters of Gangrenous Intestine.

The patient of Roswell Park was a young man of twenty-one years. Abdominal symptoms called for operation which revealed a gangrenous condition of the appendix, about which three or four coils of small intestine had united themselves and adhered to the cæcum, and that all these adherent surfaces were in a gangrenous condition with threatening perforation at numerous points. At least four large areas of this character were found upon the small bowel, the uppermost being apparently near the middle of its length, i. e. a long distance above the cæcum. It now became a question whether to undertake several intestinal resections or to remove the entire length of bowel which contained these gangrenous patches. The patient's condition was bad and it seemed that the measure most indicated was that which could be most quickly performed.

Accordingly, a Murphy button was used, and with it the ascending colon was connected with a loop of intestine just above the uppermost gangrenous area. The mesentery was then tied with a series of silk ligatures, and the entire section of small intestine involved was removed down to the ileocæcal valve. A considerable part of the cæcum being gangrenous, the colon was divided at this point by an oblique incision, and in this way all of its gangrenous portion was removed. After the operation the portion of intestine which was removed was straightened out and carefully measured. Without undue stretching it was found to measure 265 cm.—8 ft. 9 in. The Murphy button did not come away until nearly four months after its insertion. The patient had a tedious convalescence, but eventually made a perfect recovery.—Buffalo Medical Journal.

Glycocholate of Soda.

Charles I. Hill, from a very considerable experience in the use of this drug, is convinced that it is of the greatest value in all cases of hepatic insufficiency, and that it is almost a specific in hepatic colic. It is contraindicated when the duct is occluded, as an increase in the amount of bile during this condition will increase the amount in the circulation. The dose is fifteen grains per diem, and upward, though the minimum dose is usually sufficient, as the drug should be administered over a considerable length of time, its effects not being observable till after a week or two of treatment. From its bitter taste it can be administered only in capsules, and even then it sometimes produces nausea for the first few days, which disappears if the medicine is persevered with, a few grains of magnesium oxide with the capsule will often prevent the nausea. Occasionally it produces diarrhœa at first, but after a day or two this also subsides.—The Carolina Medical Journal, March, 1903.

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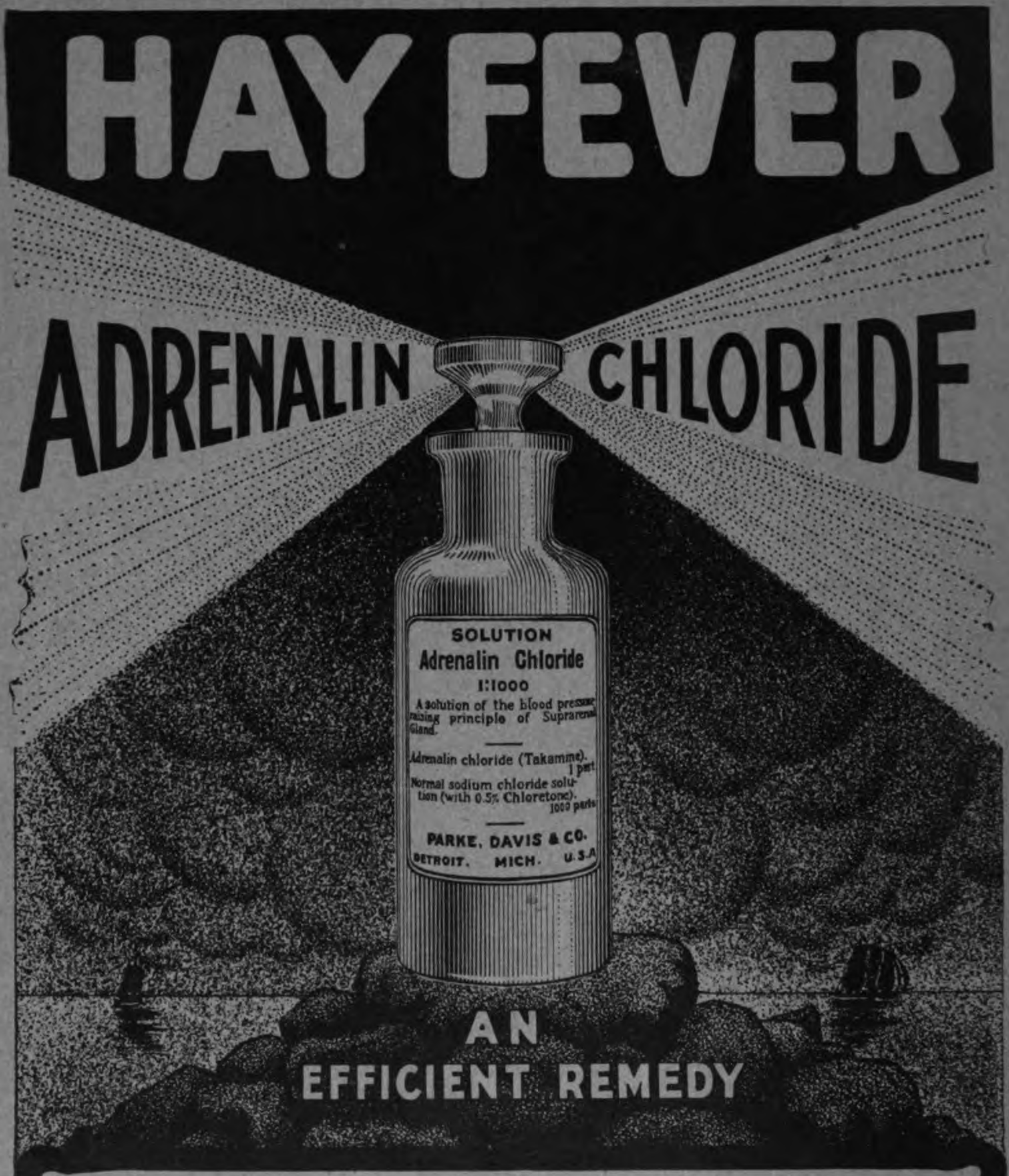
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The Code.

The American Medical Association, at the meeting in New Orleans, eliminated the word "code" from its by-laws, and adopted an "advisory document," which shall not be "mandatory," but called "The Principles of Medical Ethics," and made in explanation the following report by its committee:

"Your committee has given extended and careful thought to the proposed revision of the code of medical ethics referred to it for consideration. As you will note, on the caption of the report the word 'code' has been eliminated, and the expression, 'The Principles of Medical Ethics of the American Medical Association' adopted as adequately descriptive. In reference to this change, it is proper to say that such action on its part is based on the idea that the American Medical Association may be conceived to occupy some such relation to the constituent state associations as the United States, through its Constitution, holds to the several states. The committee, for this reason, regards it as wiser to formulate the principles of medical ethics without definite reference to code or penalties, thus leaving the respective states, etc., to form such code and establish such penalties as they may regard to be fitting and proper for regulating the professional conduct of their members; provided, of course, that in so doing there be no infringement of the established ethical principles of the association. The committee regards as wise, and well calculated to facilitate the business of the present organization and to promote its harmony, this course which leaves to the state associations large discretionary powers concerning membership and other admittedly state affairs. Your committee has retained, to a large extent, the phraseology of the existing code, while aiming at condensation of expression and a better understanding of some of its statements.

"The report of the committee has been reached unanimously, without discussion or distrust on the part of its members, each aiming to formulate a result based on principle alone, and without regard to any past or present disagreements or misunderstandings whatsoever. Such being the case, the committee invites your candid and unprejudiced attention and action to the results of its labor, feeling that at least some good has been accomplished."

Pure Water.

Concerning the subject of pure water an editorial of special interest appeared in the Journal of the American Medical Association of July 4th, 1903, on ground or spring water, and pointing out some of the dangers from impurity that may exist, and be unsuspected and undiscovered unless revealed by an outbreak of sickness, or by an analysis of the water. There is usually unquestioned faith in the purity of water from drive wells, and natural springs, but the supply may be contaminated in various ways. The condition of the soil through which the water percolates may be such as to render the water impure and unfit for domestic use. In chalk formations there may be cracks that allow surface water and sewage from drains to leak, and this may flow a long distance before appearing on the surface as a spring. The only safety in the use of water from whatever source the supply, spring, well or river, is its frequent analysis and vigilant inspection for impurities.

How to Purify Water.

Niagara Falls, N. Y., June 13.—Professor Otto, of France, yesterday made a successful demonstration of the ozone process of purifying water. It was witnessed by fifty officials of this city and Lockport. An electric current of 50,000 volts was sent through a cylinder ozonizer through which air passed, and as the air met the electrical discharges the oxygen was burned, creating ozone. This ozone was carried to the sterilizing tower by two pipes. The unpurified water entered the tower at the top, and there, in spray form, first met the ozone. As it flowed downward through fine granite it again met the ozone, completing the process. The water product was clear as crystal. It is stated that from 30 to 40 electrical horse power will treat 6,000 tons of water a day. Later Professor Otto will demonstrate the process before the leading scientists of the country.

Water Is Purified.

Louis Johnson's new process for purifying water by aeration, sedimentation and the use of the electric current, disposes of from seventy to ninety per cent of the bacteria in water which is subjected to its action.

But the part the electric current plays in this purification process has not yet been determined.

Mr. Johnson explained and exhibited the application of his process. Water from the intake is run through an eight-inch pipe into a tank on the floor of the pump house, and while running through this pipe is aerated through two air pipes entering the main pipe midway between the intake and tank, the air pipes operating on the injector system.

Further aeration of the water is provided for by air pipes opening into the tank under pressure. While the water is in the pipe an electric current, 400 volts strong, is sent through it and it is Mr. Johnson's belief that this current is responsible for the disappearance of the germs. It is a part of his process, however, that the water be allowed to stand in the tank before being used, and this completes the triple process of aeration, electrification and sedimentation.

Samples from this tank allowed to stand two or three days, were given to Dr. Corbett and showed some surprising results. In these cases as high as 85 per cent of the germs had disappeared. But examination, by the same tests, of samples taken from the tank and tested almost immediately, did not show the same degree of purification.

These results have led Dr. Corbett to believe that the part played by the electric current used by Dr. Johnson has not yet been determined, especially in view of the fact that water is such a good conductor of electricity. Whatever the relative amount of purifying done by the air, electric current and sedimentation may be, the city bacteriologist does not pretend to say. That the final result is a great improvement in the condition of the city drinking water is an established fact.

"The process could not be put to practical use at the lower river pumping stations," said Dr. Corbett, "because the station wells are not big enough, but it could be used, and to great advantage, at the reservoir, and properly applied it would probably result in eliminating over 90 per cent of the disease germs now in the city water."

Among those present at the East Side pumping station were Alderman McLaskey, Schoonmaker, Holmes and Mumm, Dr. Corbett, Health Commissioner Hall, Supervisor of Waterworks McConnell, and Harry Robinson, of the General Electric Company. General surprise at the results obtained, and belief that the process could be successfully used at the reservoir were expressed. Dr. Corbett was furnished with other samples of water taken from the tank in the East Side station and will continue his investigations.

Latest Report of Dr. Corbett.

In regard to the Johnson process of purification. I have been unable to take the process up step by step to determine the part played by each individual factor. It does not seem reasonable to suppose that any current of electricity could directly kill bacteria, when we consider the resistance of water to electricity and the relatively large sectional area of the stream of water. It is possible that the air is converted into ozone by the current and we know ozone has decided germacidal properties when applied to bacteria in water. I am inclined to the belief that sedimentation is a very important factor. However, water is cleared of bacteria in a much less time than we ordinarily obtain by sedimentation alone. At the beginning of the sedimentation process there is first an increase in the number of bacteria, then an enormous decrease. In the glass jar when sedimentation was carried on, a layer of dead bacteria could be found on the bottom. I believe light is an important factor. We have found 85 to 90 per cent of total bacteria to be destroyed by the complete process and eight to ten days sedimentation.

Yours,

J. FRANK CORBETT.

Original Articles

Value of Blood Examinations

E. H. McINTYRE, M. D.

Since the great strides in labŏratory methods have culminated in the perfection of microscopic work, it becomes an important issue to the practitioner as to what extent this department of science can aid him in a practical way. He has no time or inclination to waste in undertaking doubtful or unreliable measures. He is looking for practical as well as scientific supports, and if the laboratory in the instance of examination of the blood can furnish such aid then it will be hailed with delight by the surgeon and adopted, possibly, as a routine measure. It will be done thoroughly, quickly and as surely as urinalysis is today. Only it must be shown that it is really a paying procedure; that facts will be elicited which are helpful and trustworthy to the surgeon.

It is very noticeable that affairs have not reached that stage in surgery or medicine when blood examination has become universal. Except in some of the hospitals in the cities this practice of examining the blood is neglected for one reason or another. Not only is it not routine work, but also it becomes "last resort" work.

When the surgeon has exhausted every other resource; when he does not know what else to do, he turns to the laboratory and studies blood pictures. There is something repulsive about it to the busy man. It is prosy and ultra-scientific.

What is the present status of this question? Is it a promising field or not?

A survey of the subject brings one face to face with a deluge of literature. Text books are as numerous as exhaustive, giving to each disease a definite blood finding and furnishing, apparently, ample evidence to prove that blood examination is imperative to a correct knowledge of the condition.

But those who are its most ardent supporters do not claim for this method that it is an absolute criterion in the diagnosis of disease. They do not advocate the supplanting of the physical examination and do not wish to substitute this method, or other laboratory methods, for bedside examinations. It is their most urgent claim that this method became universal because it forms an important link in the chain of procedures, which together finally produce the true diagnosis.

That the examination of the blood should become routine seems the more reasonable when it is understood that this is the only tissue we can examine during the life of the patient. Because it comes in contact with every other tissue it is reasonable to suppose that it represents the character of the metabolism taking place in these tissues.

There are those diseases in which a blood examination is imperative to a correct diagnosis. In these the findings are definite and very characteristic. The finding of the parasite in the blood of a malarial patient is convincing and a classic demonstration of the value of blood examination.

In the anemias, both primary and secondary, the value is as established as in the event of malaria. The blood picture for each of these diseases is almost constant and furnishes a means to distinguish the one from the other. Because the examination of the blood is so important to the diagnosis of pernicious anemia, chlorosis, leukemia, etc., it becomes almost as important in the consideration of the many conditions which so closely resemble these diseases clinically.

There are cases in which malignant growths present features very similar to pernicious anemia. An examination of the blood, however, reveals a difference in pathology. In the former we find that the reds are diminished to a less extent; that peikilocytosis and polychromatophilia are less marked. We find the usual number of whites, or more likely, a leukocytosis. We find that the normoblasts outnumber the magaloblasts.

There are cases where confusion arises in the consideration of leukemia and the number of affections it resembles. It may be mistaken for typhoid fever, chronic malaria, purpura, adenitis, and tumors of the spleen and kidneys, but the blood finding in leukemia is distinctive and makes possible the avoidance of an error.

In the field of acute infectious diseases, the examination of the blood has not such a wide province of usefulness as in the consideration of the anemias, but nevertheless is invaluable. As a diagnostic sign in pneumonia, central or otherwise, the blood picture showing a leukocytosis is important. Sometimes a diagnosis can be made with considerable accuracy before consolidation and cough present themselves. As a prognostic sign, the absence of leukocytosis is a danger signal and its presence is neither good nor bad. Eosinophilia generally precedes the crisis a few days and is a favorable sign. In infectious fevers the toxicity of the blood and its coagubility have important bearings upon the diagnosis and prognosis, but these conditions are yet to be more thoroughly studied before their significance can be appreciated.

In typhoid fever the examination of the blood is most valuable. In addition to determining the Widal reaction, the quantitative and qualitative changes are important. The red count is generally low and in hemorrhage from the bowels it is especially so. The hemoglobin is low. Lucopenia, a decrease in the white cells, is a most distinguishing feature of the disease and becomes more marked with the severity of the fever. A differential count would reveal a loss in the per cent of polynuclear forms and an increase in the percentage of the lymphocytes and a decrease in the eosinophiles. The latter increase in favorable cases, before the other forms assume correct proportions.

The absence of leukocytosis in typhoid is a feature which serves to distinguish this fever from other fevers and from other local inflammations. It serves to eliminate pyemia; to exclude septicemia and to speak against pneumonia and appendicitis. With the Widal reaction it is almost positive evidence. Malaria presents no leukocytosis but the discovery of the parasite is convincing. In meningitis we find leukocytosis and no Widal reaction. In tuberculosis, miliary or local, there is no leukocytosis but the Widal reaction decides the matter.

In trichiniasis, we find an excess of the whites and a differential count shows many eosinophiles. It is apparent that the examination of the blood is a vital procedure in typhoid fever in order that a correct diagnosis be made.

It does not seem that at present the examination throws sufficient light upon the event of perforation of the bowel. Thayer has made studies in eight cases in which three cases gave decided leukocytosis, two slight, and three no leukocytosis.

In septicemia the surgeon meets one of his most deadly foes. Can an examination of the blood decide whether a wound is septic or aseptic? If sepsis be present, can it determine the degree it has attained? If temperature be present does it mean an infection? Or is it only a manifestation of hysteria or some functional disorder? How often an examination of the blood will settle these questions is still to be determined. It remains for considerable work to be done along this line to secure facts to aid the surgeon. The examination of blood cultures when positive results are observed, at present is of more value.

One of the most important things relating to the value of the blood count to the surgeon is the consideration of pus and suppurative processes. The practical surgeon wishes to know if he can rely upon the examination of the blood for the diagnosis of deep seated abscesses and suppurative processes. If he can, the scope of the laboratory widens and it at once becomes his most valued agent.

The blood examination has been made in reference to appendical abscess more frequently than in other abscesses but the findings are similar.

Besides' the Goldberg-Weiss iodine reaction and the excess of fibrin in these cases, Bloodgood finds the following leukocyte count in relations to appendicitis:

In acute cases of appendicitis at the end of the attack there is usually an increase in the whites, say from 10,000 to 15,000. Still earlier in the attack the count may reach 22,000.

In the chronic cases, the whites are reduced to below normal.

When gangrene is present there is always a leukocytosis reaching to 25,000.

When the appendix is filled with pus the count varies from 15,000 to 30,000.

With an abscess complicating the count may reach 30,000.

The author regards a rising leukocyte count as a danger signal. In cases where there is a rising leukocyte count coupled with a history of appendicitis, there is in all probability a deep abscess. Immediate operation is demanded when the count reaches 20,000.

In differential diagnosis it may be said that in uncomplicated intestinal obstruction there is no leukocytosis. In the gangrenous form and in those of a malignant inception there would be an increase in the whites.

In affections of the biliary tract, unaccompanied with inflammation, there is no leukocytosis. The same may be said of pelvic neuralgias.

Extra-uterine pregnancy or hematocele may give a leukocyte similar to that seen in appendicitis, but there is no increase in fibrin and the number of reds is diminished.

In peritonitis there is a leukocytosis unless the process be very severe, or very mild.

It is difficult to distinguish the different forms of peritonitis but tuberculous peritonitis can be excluded in the event of a leukocytosis.

In a case of appendicitis when there is a collection of pus walled off and not in communication with the circulation, the leukocytosis may become stationary or at times fluctuating. In the event of its bursting into the peritoneal cavity the white count is dependent upon the resisting power of the individual. In patients with weak resisting power, leukocyte count is low. In the consideration of pyosalpinx we have a condition producing the same effect upon the blood as in pelvic abscess and peritonitis. From three hundred cases of blood counts in this connection, Cabot concludes that increasing leukocytosis calls for operative interference; stationary leukocytosis points to the walled off abscess the extent of the count corresponding to size of abscess. Patients without a leukocytosis, call for palliative measures only.

There are a number of cases reported, such as chronic suppurative salpingitis, fibroid complicating pus tubes, hematocele and tubal abortion in which no leukocytosis was present, in all of which pus was discovered. These are perhaps exceptional and not the rule and will not misguide the surgeon if his blood examination includes the iodine reaction and differential count of whites.

There are instances in which a rise in the temperature following an abdominal operation is very puzzling to the surgeon.

Is the temperature due to the presence of pus or is it a manifestation of hysteria? Here blood examination is of great value. It is the opinion of observers that if a leukocytosis is present after twenty-four hours, and if it continues to increase, it is a reliable indication of the presence of pus.

Lastly, the surgeon faces a problem of immense concern when he is forced to decide upon an operable case. Is the vitality of the patient sufficient to withstand the shock of an operation with its attendant hemorrhage? Has the patient already lost in recent hemorrhage blood to the amount to contraindicate surgery? And is the regenerative process active enough to control the conditions?

Can an examination of the blood answer these questions?

An examination of the blood tells us to what extent the anemia has reached. A mild sort of an anemia presents a picture of lowered specific gravity and a slight lack in the coloring matter. This condition is attendant upon bad hygiene and is present in slight hemorrhages. In the more severe types we find, besides the above changes, alterations in the shape, size and staining properties of the cells and evidence of degeneration.

There is as yet no means of estimating the amount of blood lost by an examination of the blood. The leukocyte count does not seem to throw light upon this subject. Perhaps in future studies some relation will be observed.

Recently, an estimation of the hemoglobin is thought to be a reliable guide to the surgeon. Mikulioz does not operate on cases in which the hemoglobin is below 30 per cent, except in emergencies, and more conservative surgeons advise waiting till 50 per cent is reached. Besides an estimation of the hemoglobin the time of blood coagulation should be determined, especially in cases where jaundice exists and where there is any tendency to purpura or hemorrhage. If it has been found that the normal time of coagulation has been increased from two or three minutes to fifteen minutes, then operation is dangerous as death is likely to occur from capillary hemorrhage impossible to control.

In conclusion we may say that an examination of the blood is of value to the surgeon as well as to the internalist. At its present status it is indispensable because it aids him in the diagnosis of many affections. And its scope is constantly widening. It is still young, and yet it throws light of a most convincing character upon all diseases of the blood, and its application in infectious and constitutional diseases is becoming more important.

In the detection of pus and suppurative processes it may not be infallible, but when strengthened with physical findings suggesting them it is positive.

Philadelphia Obstetrical Society.

Exhibitions of Specimens, Dr. L. J. Hammond; Placenta Previa with Transverse Position—Manual Dilatation, Dr. Wilmer Krusen; Uterin Fibrona Near the Menopause, Dr. Geo. Erety Shoemaker, and Exhibition of Specimens of Papyraceous, Dr. Stricker Coles.

Dr. L. J. Hammond: Many of these specimens casually observed present nothing of unusual interest. They have all, however, to me an unusual amount of interest, because of the complications surrounding at least two of them, making what otherwise seemed to be a perfectly clear condition, one of uncertainty, until the actual condition was revealed at the time of operation.

The first specimens I show you, are two unusually large tubes and ovaries which represent rather unique specimens of gonorrhoeal pyosalpinx, clinical diagnosis being confirmed upon microscopic finding of the gonococci in the pus removed from the severed end of the tube. It is extremely rare to be able to demonstrate the presence of the gonococci in the pus found in the tubes, this being the first case in which I have ever been able to secure positive evidence.

The second specimens are quite unique. They were removed from a woman 62 years of age, and as you will note, they are unusually large, especially the left one with the anterior surfaces smooth and somewhat irregular in outline, while the posterior surface is ragged, showing adhesions of the entire posterior surface to the parietal peritoneum. It was absolutely necessary to quarry them out from the deep tissues in which the posterior surface was firmly imbedded and adherent. Their stony hardness was most pronounced. Microscopic examination shows them to be **true enchondroma.** The case is therefore one of bilateral ovarian enchondroma. I have not been able in a rather superficial investigation of the literature of the subject to find any authentic case of pure enchondroma recorded. The patient in addition to these intra-abdominal growths, had also five enlarged perirectal glands which were in size from that of a nutmeg to a hulled walnut. These have since broken down and presented, microscopically, a few weeks ago, a suspicious appearance of malignancy. I have not subjected them to microscopic examination and cannot therefore positively state their true nature. The patient's health, however, is excellent.

The third specimen which you see is so large that I am unfortunately unable to remove it from the jar, is, aside from being an unusually large fibroid, not of special interest at this stage. It is presented in order that I may bring out an unusually interesting feature in connection with the question of diagnosis that presented itself to me when the tumor was exposed through the abdominal incision, that is, an immense hematoma, which as you see by the dark area over the anterior surface of the tumor, was the first point presenting itself through the abdominal incision, and the question at once arose whether the condition was not one of cyst. Of course, this was readily negative on tapping, when the true character of the contents was revealed. The diagnosis was fibroma before operation. The patient made an entirely uninterrupted recovery.

Another point of considerable interest to me in this specimen is that the anterior and lateral portions of the uterus are alone the seat of this myomatous change. The posterior portion of the uterus seems to be entirely free from the growth. The patient from whom this growth was removed was 42 years of age and had borne one child, 19 years ago.

The next specimen, which as you see is of such great size that it is somewhat difficult to handle, was removed from a woman 32 years of age, three weeks after birth of her eighth child, at full term. The case was seen in consultation with Dr. West, who had no knowledge of the patient previous to the present confinement, nor could the patient give any intelligent idea as to whether the growth existed before pregnancy, or whether it sprang up during its course. The only information she could give was that her stomach had been very large for a year or more previous.

The entire abdominal walls were stretched to their utmost extent, bringing out very conspicuously the distal veins. The presence of fluid could be determined in about the same way as it would be in a general ascites. None of the usual points of dullness observed in ovarian tubes were present. The flanks distinctly fluid distended as would be in general abdominal ascites. On the left side and extending as far up and beneath the ribs as could be felt, was a hard mass as is shown in the specimen, extending down to the crest of the ilium, and across to about the median line on the left side. With the exception of the markedly dull area overlying this hardened mass, resembling most noticeably an enlarged spleen, the entire abdomen seemed filled with fluid from within its cavity. Vaginal examination showed the cervix in a normal condition for three weeks after labor. The vaginal vault was markedly convex outward, and pronouncedly tense. The woman presented the characteristic fascia ovariana so aptly described by Sir Spencer Wells. Though this peculiar expression is also found in cases of long standing abdominal ascites, I had, of course, in mind the probability of its being ovarian cyst, though the large mass as you recognize as decidedly myxomatous made me undecided, and determined me to give some weight to the thoughts of its being a splenic ascites. Of course, this possibility was at once set aside after incision was made. An unusually long incision, extending from the umbilicus to the pubes, was necessary to deliver the sac after the fluid which was rather thick and chocolate colored, had been withdrawn. The wall of the cyst was adherent throughout the entire perietal peritoneum anteriorly, laterally and posteriorly, also to the liver, transverse colon, stomach, spleen and diaphragm, the intestines occupying but an incredibly small space posteriorly. The growth contained more than three gallons of chocolate colored fluid, weighed 110 pounds, and the adhesions were the most extensive that I have ever undertaken to break up. The abdomen was drained for 48 hours, the patient making a perfectly natural recovery.

This myxomatous mass that you see occupying the left side of the sac is very like in shape to the spleen. It is certainly interesting to me in showing how excusable it would be to at least give serious thought to the possibility of hypertrophied spleen with ascites, especially when we remember that this cyst wall was so firmly adherent throughout, above, laterally and below that it gave no symptoms different from what would be found in a general peritoneal ascites. The case was, however, one of left-sided ovarian cyst. The rather ignorant subject from whom the specimen was removed prevented our arriving at any conclusion as to whether it developed during the course of the last pregnancy or had been much longer present. From the extensive and well organized adhesions, however, I am strongly disposed to the belief that it had probably been present during her former pregnancy.

Placenta Previa with Transverse Position — Manual Dilatation — Podalic Version.

By Dr. Wilmer Krusen.

The following case of placenta previa seems of sufficient interest to be reported, if only to stimulate discussion upon the treatment of this most serious complication of pregnancy.

Mrs. McC., aged 34, Ixpara, was first seen with her physician, Dr. John McCormick, on January 6, 1903. The diagnosis of placenta previa had already been made. The patient had been bleeding irregularly for five weeks. Her general condition was good; and the pregnancy was about at term. The hemorrhage had been quite profuse. On examination, the fetus was found in a transverse position; head to the left of the mother's abdomen and the back anterior. The cervix was softer and more succulent than usual. The os was slightly dilated, so that little difficulty was experienced in passing a finger through the cervical canal and feeling the characteristic sponge-like placental tissue above. As the patient had refused to enter any maternity hospital, it was determined to treat the case at home as well as the environment would permit.

On January 7, under ether anesthesia, after the usual careful antiseptic preparation, rapid manual dilatation and podalic version were performed with speedy delivery of the child. The dilatation of the os was easily accomplished as the woman had borne nine children and had a roomy birth canal. The hemorrhage during the detachment of the placenta, which was centrally implanted, was exceedingly profuse. A gush of blood, resembling the outpouring from a fireplug, deluged the obstetrician. The right anterior leg was brought down first, followed in a few seconds by the other, and the buttocks temporarily controlled the hemorrhage. The child was speedily delivered, although in extracting the arms the right humerus was broken. As the uterus was much relaxed the placenta was immediately delivered manually.

The anesthetic was withdrawn and by vigorous external and internal manipulation, by irrigation with hot normal saline solution and a tampon of iodoform gauze, uterine contractions were excited. The patient's condition was excellent, no shock was noted, the pulse was full and strong, running from 75 to 80. The child was perfectly developed and although slightly asphyxiated, was easily resuscitated. As the mortality for the children in placenta previa is over 50 per cent and increases as the placenta is more centrally situated, the saving of the child was particularly gratifying and could not have been secured had there been the slightest obstruction or delay in delivery as the placenta was perforated and almost completely detached some seconds before the birth of the child. The subsequent convalescence of both patients was uneventful.

This case illustrates the value of terminating pregnancy in a most conservative manner as soon as possible after a placenta previs has been positively diagnosticated, without waiting for the onset of labor, or subjecting the patient to the danger of hemorrhage in the absence of a physician. By having trained assistance and all facilities at hand for the treatment of hemorrhage and shock, the best interests of the patient are assured. In this case the multiparity of the patient and the roomy birth canal rendered the manual dilatation extremely easy. In other patients, under other circumstances, it may be necessary to employ some mechanical method to effect dilatation such as the Champetier de Ribes balloon or the Bossi dilator; but I believe it will rarely be advisable to perform Caesarean section in the treatment of these cases.

Discussion.

Dr. Stricker Coles: I was very glad to hear of the success of Dr. Krusen with his case of central placenta previa, having saved both the mother and the child. This subject has greatly interested me for some time, but I have not been able to get satisfactory statistics, as most papers do not clearly define the different varieties of placenta previa. The mortality of the lateral, marginal and partial varieties should not be considered with that of the central variety. The first three can be treated by rupturing the membranes and saving in many cases both the mother and the child, so that I will limit my discussion entirely to that of central placenta previa.

In a great many cases of central placenta previa, the bleeding comes on early at about the fifth month before the child is viable, and in these cases the life of the child is, of course, not to be considered, and the case is best treated by version and slow extraction. In cases where the child is viable we come across two conditions: The first is where there has been considerable hemorrhage and the life of the child is lost or so nearly lost that a radical operation would not be justifiable, and these cases would be best treated with version and the slow extraction of the child. But in those cases where the child is viable and nearly at term and there has not been a severe hemorrhage and the child is in good condition, we have to consider both the life of the child and that of the mother. I believe in treating these cases that if the patient is a multiparous one, where the cervix can be easily dilated and the vagina is large, these cases would be probably successfully treated with version and rapid delivery, trying to save both the mother and the child; but we must always remember that where we do rapid version and try to save the life of the child, at the same time the danger to the mother is increased, due to the lacerations of the cervix which is soft and vascular and will increase the danger of postpartum hemorrhage, because the muscle fibres of the cervix have been torn and paralyzed. Central placenta previa does not very often go to full term, but if I should see a patient with the central variety where the cervix is not easily dilated and the vagina is small, whether it be a primiparous patient or one that has had only two or three children, I could certainly advise such a patient to have Caesarean section, and for two reasons: First, for the sake of the child, as you will hardly be able to deliver the child quickly enough to save its life in more than 25 per cent; and second, for the mother, to lessen the danger of post-partum bleeding. I would in this case do celichysterectomy unless there were some special reasons for the removal of the uterus. Where the child is removed through the uterus, there is not so much danger of hemorrhage, as the cervix has not been torn, and I do not think it is necessary in these cases to remove the uterus. If necessary to control hemorrhage, you can pack the uterus with iodoform gauze.

In conclusion, version should be performed in those cases where the child is not viable, and where the child is dead, or its life is endangered from severe hemorrhage, and where the cervix is easily dilated and the vagina is large. In those cases where the cervix is not so easily dilated and the vagina is not large, and the woman has not had a severe hemorrhage, and the child at or near the full term of gestation, under these conditions I think Caesarean section should be employed.

Dr. George M. Boyd: Dr. Krusen is to be congratulated upon the result in this case. To deliver a patient with central previa successfully and with a living child, I think, is a great feather in his cap. It shows his dexterity and ability in performing version.

I agree with Dr. Coles in regard to the treatment of a few cases of placenta previa that will come under our care; that is, treatment of placenta previa centralis by Caesarean section.

About a year or two ago I expressed my opinion on this subject in a short paper before the County Medical Society; and I remember in the discussion of that paper the consensus of opinion was opposed to Caesarean section for even placenta previa centralis. Each case I feel must be a study in itself. In marginal placenta previa, manual dilatation and podalic version, it seems to me, will serve us best. In my experience it has been—seemed wiser, after performing podalic version, to treat that case as a breech presentation rather than rapidly extract the child. For the majority of cases of placenta previa manual dilatation and podalic version will serve us best. But there does not seem to me—I agree with Dr. Coles in the stand that he takes; it does seem to me that there are a few cases that probably would be better treated by Caesarean section; and those few cases I would limit to central implantation of the cervix in the primiparous patient and in a patient where there exists a rigid cervix—a cervix that can only be dilated with difficulty.

There have been a number of papers written upon the subject pro and con, and the majority, I think, have opposed section for the treatment of placenta previa. One criticism has been the fact that in the majority of cases there has existed some hemorrhage before you see the case. Another criticism is that some cases are already infected. Another is the fact that in many of the cases the pregnancy is not at term and the child will hardly live, even if delivered by Caesarean section.

The course that I believe we should follow in all cases of antepartum hemorrhage should be with the first hemorrhage to anesthetize our patient and make a careful diagnosis. If the patient is suffering from a marginal or lateral implantation, manual dilatation and eversion will suffice; if, however, the placenta is centrally implanted and the patient primiparous, the cervix rigid and difficult to dilate, the patient at term or near term, I would feel it my duty, after she has come out of the ether, to place the situation plainly before her and give her the chance of Caesarean section should she prefer that operation.

Dr. Oliver Hopkinson: The Doctor

must be congratulated upon the happy ending of his case. I believe in placenta previa the lives of the mother and child are antagonistic, trying to save both, you are apt to lose both.

I would like to ask the Doctor how he made the diagnosis of central placenta previa, which I think can only be made after full dilatation of os. The treatment in cases of the variety described tonight is version followed by slow extraction. I believe it safer to bring down one foot only, giving the uterus time to contract and retract. The great temptation in these cases is to hurry extraction, producing a post-partum hemorrhage, which may seriously jeopardize the life of the mother. In reference to Caesarean section I think its field of usefulness is very limited. With rigid os and mother and foetus in good condition it could be considered, especially if you fear a centrally located placenta.

Dr. L. J. Hammond: My experience in the treatment of post-partum has in the past been rather larger than I expect it will ever be again; since my work nowadays is not so largely obstetrical but the difficulty I have always experienced has been in the early diagnosis of placenta previa—in this respect fully agreeing with what has been said by Dr. Hopkinson; or at least with me it is extremely difficult, and in a large percentage of the cases it has been impossible for me to say that any given case was one of placenta previa, either centrally or laterally, until after the cervix was dilated sufficiently for me to determine it by digital examination. When I find I have a condition to deal with of placenta previa, I at once anesthetize the case and undertake a rapid dilatation. I never have found any difficulty, at least, in getting rapid dilatation, because in every case, to the best of my memory, that I have ever seen, it has been at full term, the woman having been in labor has consequently lost considerable blood, and through having lost this blood the tissues are readily relaxed, enabling dilatation, not alone of the cervix, but also of the entire birth-tract to be decidedly easy of accomplishing. Before active uterine contractions begin the bleeding can always be controlled by thoroughly tamponning the vagina with sterilized gauze. This in addition to controlling hemorrhage stimulates active uterine contractions. So, I have never had any difficulty in this direction, i.e., in the dilatation. If uterine contractions are not strong, I, after securing the feet, bring one foot down as a tampon, after which I content myself to wait until the cervix is sufficiently dilated to extract the child. I have never, to the best of my memory, had a fatal termination from placenta previa. I have seen one, or possibly two, fatal cases when students had been in attendance, the condition not having been recognized sufficiently early. In my own practice I don't remember ever having lost a case, and that has been my method of procedure. Personally, I do not see how it is possible to make a diagnosis weeks or months before the labor begins, unless the cervix be dilated to such an extent as to precipitate labor prematurely.

Dr. Krusen closes: One or two words about the case in point. This patient was a very favorable case. She was one of those Irish women, in the habit of having their children easily. The babies had been almost ready to drop out of the birth canal. The delivery, then, was performed in three or four minutes. The legs could be grasped with the greatest of ease. There was no particular skill required in perfecting version.

As to why I am certain this case was one of central implantation—it being suggested by Dr. Hopkinson as possibly an error in diagnosis—the method of making the diagnosis was something like this: In dilating the cervix, the more I dilated the more I found that the orifice was covered with the placenta. I started in with gradual dilatation, getting one finger in early, and later the entire hand and found as I dilated the os, the os was still covered with placental tissue; so I felt confident of my diagnosis. At last I despaired of getting around the edge of the placenta and so perforated it and quickly accomplished the version.

In regard to teaching the Caesarean section as a method for treating placenta previa, I think we should be very careful as an obstetrical society. In the hands of such accomplished obstetricians and operators as Dr. Coles, Dr. Boyd, Dr. Hopkinson and others, this is practically a successful method of treatment; but, if we put ourselves on record as advocating the treatment of placenta previa by Caesarean section, we are going to sacrifice not only the lives of the children, but very often the lives of the mothers. When we can have statistics presented, showing 107 cases in one series by four practitioners with only one death, it is a question whether we ought to advocate this method ever in the treatment of placenta previa.

To go back again, these very gentlemen admit, themselves, it is impossible to make the diagnosis of a central implantation. If they can show the case is a primiparous woman and has a centrally implanted placenta, then Caesarean section is indicated; yet, in the next breath they tell us, "You can't tell the variety until labor starts."

Now for the point to which Dr. Boyd called attention, the one point which covers the whole substance of the matter; that is, that each case is a law to itself. You may have a case in the maternity hospital with all the modern appliances; you may have one away in a little two story house; another away off in a farm house. In each case you must serve the interests of both the child and the mother by using the method best adapted to that particular case and its environment.

Uterine Fibroma Near the Menopause.

By George Erety Shoemaker, M. D.

The medical heresy is passing away that fibromas grow less, stop bleeding, or do not develop at the time of the menopause. An experience of many years in dispensary and hospital has failed to show a case. On the contrary, peritonitis, pyosalpinx, pressure on urinary organs, hemorrhage kill, or forever impair vitality in many who are waiting for a menopause which never comes. Three more cases illustrate onset of severe symptoms after age of forty-four.

(1) Widow, aged 44; married ten years; never pregnant. Within three years periods have become almost constant. Last two months in bed from severe hemorrhage, getting worse. Hemoglobin 45 per cent. Tumor choked pelvis, reached three inches above navel. Removed by ligation. Aseptic recovery. A year later reports herself "splendidly well."

(2) Single woman, aged 47. Hemorrhage increasing under her physician's treatment, two years. Now soaks 10 to 12 large napkins per day during long and frequent periods. Dyspnoea. Chronic interstitial nephritis. Has had phlebitis legs and thighs. Weight 215 lbs. Very short. Tumor five inches in diameter wedged in pelvis. Removed by difficult ligation. Aseptic recovery.

(3) Widow; aged 51; three children. Hemorrhage gradually increasing seven years, now almost constant. Fibroma reaching three inches above navel. Operation by ligation easy. Aseptic recovery.

These cases are part of a consecutive series of 19 hysterectomies at the Presbyterian Hospital without a death; also part of a consecutive series of 60 abdominal operations in my service at the same institution, with one death. That death followed a few hours after operation for intestinal obstruction in a patient who had been vomiting 13 days before I saw her, and had gangrenous intestine with extensive adhesions.

The operations included 1 Porro-Caesarean section, 14 other hysterectomies, 2 extra-uterine pregnancies, a gall bladder and two kidney cases. The appendix was removed 20 times, 6 of them as a primary operation. Nineteen cases had salpingitis. Pus was present 18 times at the operation, six of these as true pelvic abscess outside the tubes, and not due to appendicitis. There were two tumors of the ovary, etc. Once only the abdomen was opened to suspend the uterus.

Dr. L. J. Hammond: These cases reported by Dr. Shoemaker are interesting to all of us, especially to the surgeon; and he is to be especially congratulated upon having had so large a series of cases, with practically no mortality. I know so well the difficulties we encounter in removal of these fibroids, and in fact, most every intra-abdominal pathologic condition. Every year I find that my work becomes more difficult, and most every case that comes to me, seems to bring additional complications to what they did a few years ago. Just why it is so I do not know, unless it be that the easy cases have all been used up—have all been operated on and cured. Within the past few months I have had a series of the most difficult intra-abdominal cases to operate upon that I have ever before operated upon, because of the extensive adhesions, etc., that I have had to deal with. These cases referred to by Dr. Shoemaker as being partly intraligamentous are always very difficult; they are difficult to me at least, because of the great depth you have to deal with so very often, the result of this, and especially if there be, as there so often is, extensive adhesions. I would like to hear from Dr. Shoemaker as to whether these intraligamentous tumors were extensively adherent and his method of securing the vessels under such conditions.

Dr. Geo. M. Boyd: In one of the cases that Dr. Shoemaker reported he told us that the tumor completely filled the pelvis. I would like to ask Dr. Shoemaker what operation he resorted to in that case. In my experience those cases have been probably the most difficult to operate upon. The course that I have pursued is to tie down upon one side and, boldly cutting across the cervix, ripping the tumor out, catch the bleeding vessels. To tie down on either side before removing the mass has always been a difficult course for me to pursue.

Dr. Krusen: The thought came to my mind while Dr. Shoemaker was reading his paper, about how much more radical operators have become in the treatment of fibroid tumors. There seems to be a tendency in recent medical literature to deal with the degenerative changes in fibroid growths. Formerly many specialists told their patients that if they had small fibroids and were near the menopause, operation was not required; but there have been a number of articles contributed lately, and much work has been done by pathologists showing the frequency of sarcomatous degeneration, and this possibly will lead us to teach in the future that fibroid growths should be removed as soon as recognized, whether they are producing very marked symptoms or not.

Dr. Hammond: Dr. Shoemaker, do you make a blood count in every case? If so, what amount of reliance do you place on it, especially in fibroids—what has the leucocytosis been?

Dr. Shoemaker closes: I would say in the cases that have not had inflammatory complications I have not generally had a leucocyte count, as I have never found anything helpful from it under such conditions; but I always have a hemoglobin estimation. Some of these cases have been reduced to a very low point by hemorrhage.

We are obliged to temporarily control hemorrhage while we can bring the hemoglobin up to a reasonably safe point. To do this I use a tight vaginal gauze pack with the patient in the knee-chest posture. Renew every third day. I give mammary extract, five grains four times a day and keep them in bed. Ice is put on if there is local peritonitis until the patient is in better shape.

As to the method of removal, when the tumor is intraligamentary on both sides, I think the best we can do is to go down with forceps and ligatures on the best side, and cut away the tumor as fast as possible, catching the arteries as they jump. That is what happened in this stout woman. There is a little more blood lost that way, but you cannot give tumors which choke the pelvis treatment which is more satisfactory as far as I can find. I have never felt like going down through the tumor with the uncertainty of being able rapidly to ligate.

Exhibition of Specimen of Fetus Papyraceous.

By Dr. Stricker Coles.

For this case I am indebted to Dr. J. H. Spruance, of Wilmington, and he gave me the following history of the patient: The woman was thirty-five years old, she has had three children and three miscarriages, the last miscarriage being two years before this pregnancy. As near as he could count, the patient was advanced three hundred days gestation. The first stage of her labor lasted eight hours, the second stage two hours and the third stage about an hour and fifteen minutes. The placenta and foetus papyraceous was removed by Crede's method. The child was a male, weighing eleven pounds and six ounces, was well developed and was in a perfectly normal condition. I find that the specimen, which was delivered on the 11th of January of this year, has been placed in a bottle with mouth so small that it cannot be removed. The condition which I wished to especially investigate was whether there was a complete chorionic sac for both the foetus papyraceous and the child. There are always two amniotic sacs, but of course, in many cases there is only one chorion, but this I could not determine. In both cases there is a velamentous attachment of the cord to a single placenta. This is a rarer condition than where there are two separate placentae. I would say the foetus papyraceous had grown to about the period of three and a half months gestation before death.

AN ADDRESS.

Delivered before the Medical Alumni Association of Harvard University by Hon. Moorfield Storey, March, 1903.

We print in part (the balance later) the address of the Hon. Moorfield Storey before the Medical Alumni of Harvard Medical College on the 16th of March, 1903, knowing that it will prove interesting and instructive to our readers, and especially to those who find themselves in court as expert witnesses. The address is full of good advice and suggestions, and we will venture to add only one, or rather emphasize one that may be inferred from those given, and that is—never to try to evade a fair question in cross-examination if the answer is apparently in favor of the opposite side. Such attempt at evasion will be construed by the court at once as bias in the witness, and weaken, if it does not entirely destroy all the influence of the witness in the minds of the jury.

Mr. Chairman and Gentlemen:—I have been asked to speak to you tonight on the relation between the legal and the medical professions.

What we are really interested in, I take it, is the relation between the two professions, when they meet in the administration of justice; and there is a large class of cases where we find it impossible to reach any just conclusion, or even to pursue certain lines of investigation, without your assistance. A man, for example, is found dead; and the question arises, what killed him? What is the cause of the death? A man is charged with crime. Stains are found on his clothes. The question is, What is the nature of those stains? Or, when he is brought to trial, he claims that he was insane; and the question of mental capacity is presented. A will is offered for probate, the question arises whether the testator is of sound mind, and we are obliged to bring the medical expert into court to help us with his opinion.

A very large class of cases arise from the daily and hourly accidents that happen all through our streets and on every line of transportation. A man is badly hurt—or says he is. Is he speaking the truth? What is the nature of his injury? What is the probable cause of his disease? How much is fact, how much is imagination, how much is pure fraud? Those are questions on which we have to ask your assistance; and how should the law and medicine best co-operate in dealing with them?

Now, in the first place, there are two important distinctions which you must remember all through any discussion of these subjects. The lawyer is dealing with two things: first, What are the facts? second, What are the consequences which the law attaches to the facts?

A man is nearly killed by violence; but whether it is murder, whether it is man slaughter, whether it is justifiable homicide,—all those things do not depend on the method of the killing, but depend on the facts outside. The medical man would see exactly the same thing if he examines the body, but whether the law calls it one thing or another depends on the facts. In the same way a man is clearly more or less affected in his mind. If the incapacity reaches a certain point, he is said to be incapable of making a contract, but capable of making a will. If it goes a little further, he is incapable of making a will. That is a legal distinction, not a medical distinction. The medical man will tell you exactly how incapable he is. The law will say whether that degree of incapacity unfits him for will or for contract.

Of course the same question arises where you are dealing with criminal responsibility. The question whether a man's mind is affected may be a simple question, but whether his mind is so far affected as to make him an unconscious agent is another question.

I remember a good many years ago reading some article by a distinguished expert in mental disorders, in which he said there was a man among his patients who was very much inclined to kill his keepers; and he threatened every sort of criminal proceeding, but the man said to him, "You cannot punish me: I am insane." The doctor replied, "I cannot punish you that way, perhaps, but I can stop your tobacco." And after he had done that once he had no trouble with the man. He had mental capacity enough to realize that he was doing wrong, and sufficient power to stop himself when a disagreeable consequence was presented.

You will testify what his capacity was; and the law will say whether, on the whole, his mental capacity is such that he ought to be held responsible for his acts or not.

Another case will arise where a man meets with an accident. You will find him very seriously hurt. The question which he tries to present to the jury is whether somebody else must pay for that hurt; and that is a question of law. He may be so far careless himself that the law says, "It is your fault that you are hurt, and not the fault of the man whom you sue; and, consequently, you cannot recover."

Those are inquiries which present themselves to the lawyer, but need not present themselves to the doctor, because the doctor deals simply with the fact as a fact. He has no concern whatever with the consequences. It is his business to tell exactly what he finds, exactly what he sees, exactly what his opinion is as to the causes of the consequences of the conditions which his examination detects. Beyond that he has no responsibility whatever for the consequences which the law attaches, and that is one great distinction between the attitude of the lawyer and the attitude of the doctor in pursuing investigations where both must cooperate in order to reach satisfactory conclusions.

Now there is another thing. The law supposes that the best method of reaching the truth is to hear both sides. Consequently, whenever any inquiry is presented to the court or jury, each side is represented by counsel. That counsel is an officer of the court. He is appointed or receives his admission to the bar in order that he may act as the representative of one or the other party in any litigated question that arises. It is his business to say all that can be said on his side of the case, and it is the business of counsel on the other side of the case to say all that can be said on the other side; and experience seems to have shown that this, on the whole, is the best way of ascertaining the truth.

But, of course, like other inventions, it has its imperfections. It is almost impossible for a lawyer, employed to represent one side of the case, to forget himself entirely, not to take an interest in the outcome of his case, not to be anxious to present everything,—not only everything that can be said fairly for his client, but a great variety of things that cannot fairly be said; not only to present all the facts that tell his way, but to conceal the facts that tell against his client. And, consequently, a case may be tried, and, through the great skill of one side and the small skill of the other, only one side of the case may be presented. That is one of the evils which is inseparable from that method of reaching the truth; but, if you were to take any other system, you could probably find just as great evils.

Suppose men came into court without counsel, and the judge merely undertook to do justice between the parties. If a man was poor and ignorant, if he was not skillful in presenting his side of the case, if he was not in the habit of speaking, he would find himself at an enormous disadvantage in dealing with a fellow who had been plausible enough to obtain his money by false pretences or in some other way. The abler man, the more skilful man, the more experienced man, the better-educated man, would have an enormous advantage, which is overcome when each party can draw on the members of the bar and each man have the assistance of his own counsel, so that, while the system has its abuses, it is probable that no other system would be any better.

The judge whose conscience was not informed by argument of counsel, the man who sat day after day hearing cases, would soon get into a routine way of dealing with them. His own prejudices would count; and it is important that the opposite side of the case should be presented, in order that the judge should be on the alert, and, if he make a mistake, to have it clearly pointed out to him, and therefore be less liable to persist in it. The lawyer, therefore, is necessarily a partisan: the doctor should never be.

The doctor comes into court not to help either side. No matter who calls him, he is not witness of that party, but he is the witness of the court. He is there to tell the court and the jury exactly the facts, not to make himself, as is sometimes said, "the counsel in disguise" of one of the parties; and it is because doctors forget that, and because they feel, as they sometimes allow themselves to say, that they are retained for one side or the other, that experts have fallen into disrepute, and you find men who believe, and believe on the strength of a great mass of evidence, that you can find a doctor to swear to almost anything, and not merely a doctor, but any expert. It is not the peculiar province of the medical profession. It was that attitude of the expert toward his case which led the distinguished English judge to say there were three kinds of liars,—"liars, damned liars, and experts." (Laughter.)

So much is it the rule that a lawyer is merely the exponent of his side, that a lawyer is never allowed to state to the jury what his own opinion of the case is. He may present the evidence, he may present this view and that view; but he may never say, I think so and so. He is immediately leaving his proper province and undertaking to become a witness, which he has no right to be. The doctor, on the other hand, must always give his opinion. There is that radical difference between us, which you must always bear in mind at every stage of a legal investigation.

Now, bearing in mind this essential difference between the attitude of the lawyer and the doctor toward the investigation that we are both undertaking to pursue, I want to give you a few practical suggestions:—

The first attitude of the doctor toward the case is that of the investigator. He may be called into it in a great variety of ways. He may be the medical examiner, to whom the first information of the case is brought; and it is his duty to make the first examination. He may be the attending physician, who is called in case of an accident; and he may think that the accident is likely to lead to a lawsuit. He may be the doctor who is attending an aged or more or less mentally infirm testator, and from his confidential relations with the family may see what efforts are being made to affect his mind and influence him to make a will, or some other disposition of his property. If your eyes are open, you will always know—almost always—when your particular professional experience may lead you into court.

Now bear in mind that your first duty is to examine the facts, and to make your examination just as minute, just as thorough, as you know how to

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Leo M. Crafts, B. L., M. D.

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We are in receipt of a handsome bacteriological chart from the house of M. J. Breitenbach Co., of New York, which is one of the most useful and ornamental adjuncts of a physician's office which we have yet seen. The chart consists of sixty beautifully colored lithographs of the pathogenic bacteria with which physicians are acquainted. It is a ready chart for reference and a guide to the laboratory worker. We are pleased to state that a copy of this chart will be sent free to our readers.

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Editorial.

Preparatory Education for Admission to Medical Schools.

As the time approaches for the opening of our medical schools the much discussed question for the requirements of education comes up for consideration. These preliminary requirements have greatly multiplied during the past few years in the United States, and are steadily advancing. We now have as existing extremes certificates of grammar and high schools for one, and those of Harvard and Johns Hopkins requiring a complete course in a college of arts or science for the other, and the latter also insists upon a knowledge of French and German, while Harvard specifies that the student must have studied chemistry. Whether the degrees of A. B. and B. A. may mean much or little will depend largely upon the student and somewhat upon the institution conferring them. A thorough examination of all applicants for admission to medical schools would be more satisfactory, and should be made without regard to certificates of scholarship recommendations except those concerning moral characters; competent students will not object, and no others are needed in our schools. It will not be denied that many eminent and successful physicians and surgeons have honored the profession of medicine, and have advanced the science (what there is in it) without academical training, or what is termed a liberal education; but they have been men of unusual mental discernment and ability, with minds trained by observation to grasp the essentials of subjects, and personal qualities of intellect commanding influence and respect. Whether a broader education, a familiarity with all the dead and modern languages would have made them better or more useful medical men may be left to conjecture; but such men have been exceptions to the general rule of persons, and may be said to have the special aid of genius; what we have to deal with is the average young man who elects medicine and its practice for his life work. The essential foundation for this study is thus stated by Dr. N. S. Davis, Jr., of Chicago.

"Inorganic chemistry and qualitative analysis; mechanics, light, heat and electricity; general biology; some comparative anatomy, particularly of vertebrates; German and French, and such botany as will acquaint them with the more important groups of plants; experimental psychology and logic."

Some subjects in this list are more important than others, and a knowledge of German and French, though convenient and desirable for any man who calls himself educated, is not so necessary so far as the practice of medicine is concerned as all important items of information in the progress of medicine and useful discoveries in Germany or France are quickly brought to the attention of the world and printed in English.

Laboratory work is very important, and as much as possible before beginning the other studies in medicine and surgery will greatly assist the student in comprehending what is taught along all the lines of his medical education. Some other essentials besides scholarship are necessary to insure success; such as sound health, habits of industry and persevering application, and good old "Teutonic Pluck."

"Stick to your aim, the mongrel's hold
will slip,
But only crowbars loose the bull dog's
grip;
Small as he looks the jaw that never
yields
Brings down the bellowing monarch of
the fields."

—O. W. Holmes.

The Medical Man In Great Britain.

The "Cornhill Magazine" for June reviews the condition of the medical profession in Great Britain, as compared with that in the United States. It would appear that the prospects of the medicine man in the former country are brighter than in the latter. The same strenuous hard working life is promised with a lack of the great prizes attending the church, the army and the law. Degrees in medicine are secured by resident study at one of the twelve universities requiring a minimum attendance of five years. Admission to practice medicine, however, is not limited to those possessing degrees, but is also granted to those passing a satisfactory examination before one of nine professional corporations. The physician after leaving the university has a variety of covers open before him. The government service is more extensive than in this country and offers to the young surgeon with small financial resources, great opportunities.

General practice corresponds fairly with general practice in this country and while fees are somewhat smaller, the larger practice falling to the general practitioner more than compensates.

In the "Post Graduate" for June, Dr. Antonio Fanoni reports experiments in regard to intra-vascular injections, 1-5000 formalin sol. in normal saline solution for septic conditions. The writer is of the opinion that the infusion of antiseptic fluids are not as effective as has been reported. His experiments on rabbits were supplemented with observations of four men who had undergone transfusion of formalin solution in blood poisoning. In these four cases death resulted. The author concludes that the intra-venous infusion of normal saline solution is of more value in these cases.

The Walker Hospital and Sanitarium has been opened at Worthington, Minn., for the treatment of surgical, nervous and mental diseases. Dr. Walker is installing a complete outfit for the treatment of chronic cases. Miss Louise M. Norris fills the office of superintentlent. This institution will prove of great advantage in that locality, and there must be a very good field for such an enterprise. We wish the doctor success in his work.

Victims of the Alps.

The "playground of Europe," as the Alpine region has been called, is annually the graveyard of many adventuresome tourists. This year the death roll has been even above the average, for already there have been recorded more than three hundred accidents resulting in the death of one hundred and fifty visitors. The causes of this unprecedentedly large number of accidents have been two—cold and stormy weather and the fool-hardiness of attempting dangerous ascents without guides. In addition to the loss of life from accidents, not a few deaths occur, according to Professor Zangger, of Zurich, from cardiac thrombosis and pulmonary embolism in elderly persons who avail themselves of the supposedly safe means of reaching great altitudes afforded by the railways.

Roentgen Ray Injuries.

Numerous instances have been reported recently in both the medical and the lay press of serious and even fatal x-ray dermatitis. One of Edison's laboratory assistants has suffered in this way, and two members of the medical staff of the London Hospital were compelled for the same reason to give up their work in radiotherapy. The death of Dr. Blacker is recalled by the announcement that his widow has been granted a pension of £120 by the not too grateful British Government. It will be remembered that Dr. Blacker was reported to have acquired x-ray dermatitis of the arm while treating King Edward for rodent ulcer. The king was cured but the doctor died, a malignant growth supervening upon the dermatitis and advancing so rapidly as to baffle the therapeutic endeavors of Sir Frederick Treves and others.

Is Acute Rheumatism Contagious?

Instances of Apparent Infection of Rheumatism.—R. T. Turner reports three cases of this nature. One of his patients asked his brother, who was recovering from an attack of acute rheumatism contracted and treated in a neighboring town, to come and stay with him for some weeks. About a week after the arrival of his brother the host began to feel ill, had slight tonsilitis, followed by an affection of his legs, which appeared to be erythema nodosum, and a few days later developed a typical attack of acute rheumatism, which ran an ordinary course. I may say that the brother when he came down here had still remaining excessive perspiration and some stiffness of the joints, and presumably still had some of the rheumatic poison in his system. In a second case the writer was called to see a patient (aged twenty-two) in a village a few miles away, and found him to be suffering from acute typical rheumatism. He also found at the same time that the patient's sister was in bed with pains in her joints, and on examination he noted that she had marked rheumatic swelling of both ankles and one knee, and a temperature of 102.5 degrees F. The brother is a railway porter, and lives in a small town. A fortnight before coming under observation he was attacked with acute rheumatism, and sent for his sister to nurse him. Exactly a week after her arrival she began to feel ill, had slight sore throat, and two days later had pain in her ankles. The third case was that of a young man aged nineteen, living in lodgings, who was suffering from a very marked attack of acute rheumatism. His aunt, who lived in London, came down to help nurse him. Three days after her arrival she complained of her legs causing her pain, and she soon developed an ordinary attack of acute rheumatism.—British Medical Journal, Aug. 8, 1903.

Original Articles

American Orthopedic Association.—Seventeenth Annual Meeting Held in Washington, D. C., May 12, 13, and 14, 1903.

From the special report of proceedings for the New York Medical Record, Aug. 15, 1903, concerning papers read on congenital hip dislocations, with discussions following:

The Forcible Reposition of Congenital Luxation of the Hip.—Dr. Gwilym G. Davis, of Philadelphia, was the author of this paper. He said that while many of the severe injuries reported from forcible reposition had occurred in older patients, they were not by any means confined to them. To call a method "bloodless" which produced haematomata extending from the middle of the thigh below to the umbilicus above, certainly savored of sophistry. He would suggest that the tendons of the adductor muscles be cut subcutaneously, and thus considerable traumatism at this point be avoided. It seemed to him unnecessary to resort to forcible movements in all directions as a routine practice to loosen up the joint; it was not improbable that they tended to increase the functional disability and the tendency to displacement. Violent tractions for immediate replacement should be abandoned, for everything that could be gained in this way could be obtained without danger by weight traction made in bed for a certain length of time. The method he recommended was practically that of Paci, the circumduction method of reducing luxations. The thigh was flexed upon the abdomen, followed by downward pressure upon the knee with abduction, external rotation and extension. Pressure was made upon the trochanter posteriorly while the limb was carefully extended. Abduction was maintained subsequently sufficiently to prevent the escape of the head from its new position. If the adductor muscles prevented the downward abduction they could be tenotomized, but it was not always necessary. Rather than to employ great force he believed it to be better to incise and clear the way for the head of the bone to enter the acetabulum.

Congenital Dislocation of the Hip; Report of a Case of Bloodless Reposition, Followed by Death, with an Analysis of Twenty-three Cases in Process of Treatment.—Drs. H. Augustus Wilson and J. Torrance Rugh, of Philadelphia, presented this report. The patient was a girl of seven years with a double congenital dislocation of the hip. She was in fair condition, and the radiograph indicated that the conditions were favorable for replacement. The child was slightly rachitic. Reduction by the Lorenz bloodless method was undertaken at the Jefferson Medical College Hospital, on March 18, 1903, at 11 a. m. All associated in this case were intimately connected with the eight cases reduced by Lorenz himself on December 11 and 12. The fifth and sixth hips reduced by Lorenz were extremely difficult, but finally yielded to his experienced and skilful manipulations. Thirteen hips were subsequently reduced at the hospital, and two outside, making a total of twenty-three hips. There were twelve girls and five boys; six were double and eleven single. Of the single ones, eight were right and three left. The youngest patient was twenty months; six were under two years; two were between two and three years old; five were between three and four years; five were between six and seven years; three were between eight and nine years, and two were ten years old. The case under discussion had been under treatment elsewhere since the age of two years up to within a few days of the operation by the bloodless method. Very great difficulty was encountered in reduction, far greater than in a boy of ten years with a double dislocation. Complete, satisfactory reposition could not be accomplished. Fixation by plaster of Paris in the "frog position" was done, with the expectation of a cutting operation at a later day. The anaesthesia was maintained for one hour and twenty minutes, and 3½ ounces of ether were consumed. The little patient became completely conscious after the operation, but after a time mild delirium developed, which was followed by collapse and death in twenty-two hours. The post-mortem examination was made by Dr. W. M. L. Coplin. A long and large ligamentum teres was found, which more than filled the acetabulum, and which prevented the reduction. The articulating surface of the head of the femur rested on the posterior and upper edge of the acetabulum. The capsule was elongated and thick. There was a fracture of the neck of the femur, one of the body of the ischium, and one of the ascending ramus of the ischium. The ends of the bones were all in close apposition. In addition to these findings there were acute catarrhal bronchitis, acute catarrhal pneumonia, and acute diffuse hemorrhagic nephritis.

The Resistance of Tissues as a Factor in the Manual Reduction of Congenital Hip Dislocations.—Dr. E. H. Bradford, of Boston, presented this paper, which was based on observations in the anatomical department of the Harvard Medical School, and also upon clinical observations at the Children's Hospital. He declared that Lorenz's visit to Boston had taught him a number of new and important details. He was convinced that, in the treatment of congenital dislocation of the hip within the ages of three and six, Lorenz's method was correct and satisfactory. He had come to the conclusion that the resistance offered by the capsule was less than that offered by the muscles and their tendons. The chief resistance was from the strong tendon of the adductor magnus. The resistance to pulling down the head came from the hamstring group and the long tendon of the adductor magnus and the iliotibial band. These resistance tissues could be readily overcome by small tenotomies done at a distance from the hip. In the lighter cases, i. e., very young children, manual manipulations by the Lorenz method were sufficient. In the resistant cases mechanical force properly applied, so as to pull upon and adduct the limb, and also act directly upon the capsule, was of assistance. Where the tendon of the adductor magnus was so strong that an immoderate amount of force was needed, it would seem advisable to divide the chief resisting tissue rather than incur the danger of fracturing the femur or severely bruising the tissues. The division of the tendon could be done either before the operation or at the same time. The speaker said that Lorenz had refused to operate upon a girl of nine in the hospital with double congenital dislocation, because of her age. Dr. Bradford had subsequently cut down upon the parts, and after freeing the capsule, had found it impossible to bring the head down sufficiently. This had led him to an anatomical study, carried out with the aid of Professor Dwight. It had been supposed that the group of adductor muscles felt superficially were the chief obstacles to reduction. It was found that the lower fibers of the adductor magnus were collected in a strong tendon, but that a portion which was not inserted was situated near Hunter's canal. This tendon, which was an extremely strong one, could be neither seen nor felt without dissection. This fact showed that by a small incision and a division of this tendon, three-fourths of the adductor magnus could be thrown out of commission. These anatomical facts having been demonstrated by numerous dissections, the principles were put in practice upon certain children. One trouble with all manual correction was the difficulty of holding the pelvis. A lawyer in Boston had devised an instrument by which it had been found possible on two cadavers to dislocate the head of the femur downward. The apparatus had also been tried on children of thirteen, nine, and six years of age respectively, and in these cases the reduction was made very much more easily than by the manual manipulation, and caused the patients much less discomfort. The torsion of the femur was found to be the chief factor in transposition.

Peripheral Palsies Following Manual Replacement of the Congenitally Dislocated Hip.—Dr. Henry Ling Taylor of New York was the author of this paper. He said that one of the chief dangers of the Lorenz operation was that those who were not well acquainted with it might think it was easy of performance. He felt very grateful to Lorenz for the very frank way in which he had answered all the questions put to him. Having followed a number of the cases operated upon by Lorenz's method, he had been struck by the fact that the children did not get up and walk in every case within a few days or weeks as was desirable they should do. Examination of these cases showed a complete loss of power in the quadriceps muscle, and, therefore, of extension at the knee. It was found then that Lorenz had commented upon this fact in his book. Further inquiry showed nine cases of peripheral palsy of the quadriceps muscle. These cases had been examined from time to time since then, and all had either completely recovered or were recovering from this palsy without any treatment. Only two of these patients were over six years of age, a fact which did not agree with the conclusions of Lorenz. He had found two cases of palsy in the sciatic distribution, one being a patient ten years old, and the other thirteen. The first of these had completely recovered, and the other had nearly done so.

Dr. Roswell Park of Buffalo said that after listening to these papers he had been impressed with the folly of calling this a bloodless method, and he did not believe it was safe to break bones and tear tissues so indiscriminately.

Dr. James E. Moore of Minneapolis said that with all honor to the method and to those who had brought it to a wonderful state of perfection, he felt that there were certain attendant dangers. It seemed to him rational to believe that there were certain cases in which operative treatment would offer better chances for the patient. The so-called bloodless method touched a chord of popular sympathy by reason of its name, but he could not help feeling with Dr. Park that this operation often caused a much greater loss of blood than a clean cutting operation in the hands of an expert surgeon.

Dr. V. P. Gibney of New York said that he quite agreed with many of the remarks that had been made to the effect that this method was one fraught with a good deal of danger.

Dr. Newton M. Shaffer of New York said that he wished to express his great appreciation of Lorenz's visit and his efforts in this country, for they had been of immense benefit to orthopedic surgery. Dr. Lorenz had operated at his clinic, and in every instance had been prepared to do a cutting operation if it seemed to him to be indicated; hence it could not be truthfully said that he was always a "bloodless" surgeon. Personally, he did not regard the Lorenz operation as any more brutal than osteoclasis. It was greatly to be regretted that Lorenz was unable to be present at this time and participate in this discussion as he had expected to do.

Dr. George B. Packard of Denver exhibited some skiagraphs of cases upon which Dr. Lorenz had operated in Denver. In one of the six cases, that of a child of nine years, the bloodless operation was attempted, but because of the tearing of the subcutaneous tissues the operation was abandoned and the limb was put up in an abducted position. Two of the four skiagraphs showed the hip to be in perfect position; the other two skiagraphs showed anterior transposition.

Dr. John Ridlon said that he had seen a good deal of the work done by Lorenz in Chicago, and he wished to say that he thoroughly believed this was the best single operation known for the treatment of the condition under discussion. He had notes, though not final ones, of twenty-one cases upon which Lorenz had operated, and of twenty-six cases upon which he had refused to operate, or a total of forty-seven cases. Of the operative cases, he failed to replace the hip in four; in one a fracture of the neck of the femur occurred; in one there was a fracture of the shaft of the femur, thus making six cases in which the replacement was not secured. In one of these cases, but not one of those in which fracture occurred, paralysis of the sciatic group resulted, and had not yet entirely disappeared. In one instance in which the replacement was effected, the perineum was torn. Dr. Ridlon said he had uncovered four hips upon which Lorenz had operated. The first was a child of four, and the hip was found in anterior transposition and the joint quite loose. In another child of four the hip was in anterior transposition and the joint firm. In the next case, a bilateral one, one hip was either in the socket or very slightly in front of it, while the other hip was the seat of a fracture of the femoral neck, and the head of the bone could be felt lying on a level with the greater trochanter and to the posterior and outer side of it. This gave a total of ten cases in which the final results were known out of the twenty-one cases upon which Lorenz had operated. All of the cases would be reported upon in detail at some future time. Three cases had been heard from, but not seen by him. One of these was said to be in good position; one was said to be in anterior position with the head beneath the femoral artery and nerve; in the third, Dr. Davis reported that the head of the femur had at once slipped out of the position in which Lorenz had placed it, but could be easily replaced in the same position.

Dr. J. E. Goldthwait of Boston said that all who had been associated with Lorenz must have been impressed with the number of cases which he had considered inoperable—cases in which the children were too old or had too much deformity. It seemed to him that the discussion so far had only named facts and conditions which had already been described by Lorenz in his book.

Dr. B. S. McKensie of Toronto remarked that Lorenz had not claimed to present a perfected operation, and such claims as he had made had been put forward modestly and very unostentatiously. Lorenz had made the statement in a New York clinic that he thought in cases of double congenital dislocation a successful result should be obtained by him in 25 per cent, and that a successful result should be secured in about 50 per cent of the single cases. This was very different from the view taken by the laity with regard to Lorenz's method. Moreover, those who saw Lorenz operate did not observe the exercise of any such remarkable strength as the papers pictured him as using.

Dr. Arthur J. Gillette of Minneapolis remarked that the laity and many of the profession seemed to lose sight of the fact that congenital dislocation of the hip was not always as terribly disabling as it was described as being, and that many of these persons did quite well if left untreated.

Dr. Leonard W. Ely of New York thought orthopedic surgeons were generally agreed that this condition gave rise to much disability, that it should be treated, and that the Lorenz operation, though by no means free from danger, was the best yet devised.

Dr. DeForest Willard of Philadelphia said that he had done the Lorenz operation before Lorenz's visit with indifferent results, but 'that since that time he had been using more force and with better results. Both clinical observation, and X-ray examination, however, had shown in every case not only a defective acetabulum but a defective femoral head and neck, and he felt sure, therefore, that a considerable number of these cases would relapse within a year after the child had begun to walk about. We should not allow the term "bloodless" to be applied to this operation, for a torn muscle bled far more profusely than a clean incision with a tenotomy. He predicted that in the future surgeons would divide the adductors with a knife in addition to doing the manipulative operation. He was inclined to think that when the head of the femur had remained on the dorsum of the ilium for twelve years it would do more harm than good to throw it into the anterior position; personally, he would, at the present time, be disinclined to throw the head forward in a patient over eight years of age.

Dr. A. J. Steele of St. Louis mentioned the case of a child of seven years upon whom Lorenz had refused to operate. Subsequently, by prolonged traction with division of the adductors, and by the use of screw power before operation, it had been found possible to reduce both hips.

Sir William Hingston of Montreal said that he had never before listened to a discussion characterized by so much fairness, clearness, and impartiality. Lorenz was not upon trial; it was his method, and the discussion on the latter had all been in the interests of the little patients. It was fortunate for these little sufferers all over the world that Lorenz had come to America, for the subject had been approached without previous prejudice, and in a short time it would be presented to the world entirely freed from error.

Dr. Clarence L. Starr of Toronto called attention to a case in which the ligamentum teres had proved an obstacle to reduction.

Dr. Joseph Kurtz of Los Angeles said that there was still another obstacle to reduction that had not been referred to, i. e., the elongated capsule. Lorenz overcame this by long-continued abduction and adduction.

Dr. G. G. Davis said that he did not think enough stress had been laid upon the use of continuous traction. Ultimately some of these cases would be treated by a cutting operation.

Dr. H. Augustus Wilson said that the notoriety attendant upon the visit of Lorenz to America had served to call the attention of general practitioners to these conditions, and the result would be that many of these cases would, in the future, be reduced at a time when this could be properly done.

Dr. E. H. Bradford, in closing the discussion, said that he had found the ligamentum teres present in quite a percentage of the young children. Some years ago he had exhibited a specimen showing the folding in of the capsule, and had at that time expressed the opinion that this was the chief obstacle to reduction. He was now inclined to think that he had exaggerated the importance of this condition as an obstacle to reduction, and this view was shared by Dr. Royal Whitman. The Lorenz operation was a very serious operation even in a small child, and he desired to insist that it should only be undertaken by one fully competent to do it.

II.

Compensation for Medical Services Rendered the State.

By T. D. Davis, M.D., Ph.D., Pittsburg, Pa.

What amount is a fair professional compensation is not easily decided. Quid pro quo is difficult to determine justly in regard to medical services. In law the fee is frequently decided by the value of the property in litigation; by the length of time consumed; by the importance of the case; or by the nerve of the lawyer. This fee is usually paid without complaint simply because it would be a waste of time and temper to object. Engineers, architects, etc., charge a percentage, which is quite uniform, on the value of the work, and the cost can be estimated beforehand.

In medicine, however, there is no uniform method to estimate in money the value of services rendered. It is impossible to charge the poor and rich alike. The time-honored method of charging so much per visit, with mileage added is evidently unfair to either the patient or the practitioner. One visit differs so much from another visit in value. Mileage should differ according to weather and conveyance. Fee bills are a delusion and a snare. Old and young practitioners should not be asked to charge the same prices. Reputation has real value in medical practice. Reputation often casts the deciding vote that knowledge alone is not permitted to cast. The time consumed is hardly a fair way to estimate physicians' services, nor is physical discomforts an elevated method of deciding prices. On the other hand "a doctor is worth just what he can get," is the motto of quackery. These with other reasons may account for the fact that medicine is the poorest compensated, as far as money is concerned, of any of the learned professions.

It is certainly true that most people are willing to spend more to save their property than to save their health, yes, even than to save their lives. If this is so of private individuals it is still more manifested by the governing authorities. The United States spends $75,000 to construct a single gun to destroy human life, partly under the plea of saving property, and millions are spent on floating machines of destruction, to hundreds spent for hygiene. In the army and navy the officers who are trained to destroy life are much better paid and held in higher esteem, than those who are equally as expensively trained and educated to save human lives. In the civil departments of national, state and city governments the same holds true.

The legal departments of these governments are thoroughly organized with fine talent as a rule to conduct them, and in cases of importance they can also call to their assistance the very best and even the most expensive lawyers. On the other hand, the boards of health of these same governments do not exist at all, or, to say the least, are conducted in the most penurious and indifferent manner. It is also a sad fact that they only receive anything like proper support, when it is shown that an epidemic causes pecuniary loss to the public. Money is granted more readily to stamp out smallpox than it is to prevent tuberculosis or typhoid fever. We pride ourselves, and properly so, on what our government has done for the sanitation of Cuba, but let us not forget that the governor of that island was an educated physician, or the result most likely would have been very different. Even when public sentiment is aroused and money is voted for sanitation, it is extremely difficult to have the distributing power the scientific body it should be, for too often political favorites or incompetent men are appointed rather than men of highest professional and executive skill, to devise plans and carry them into effect. It is peculiar but nevertheless true that governments will spend money freely to take care of their dead citizens or soldiers, but will give it very sparingly to take care of their living bodies. Both the public and private individuals will give generously to care for the maimed, injured or suffering, but are very stingy in giving to protect people from injury, disease or disaster.

These same traits may actuate governments in so much more liberally compensating their legal than their medical talent. That they do thus discriminate I have taken the trouble to prove by comparing the compensation of the legal and medical officers of four large cities of our country. Without taking up your time with figures in detail I simply say the salaries of the lawyers are from two to three times that of the physicians, or $6,000 for the heads of the legal departments to $2,4 for the heads of the medical departments. The city attorneys have a long list of assistants at from $2,500 to $3,500 per annum, while the assistant physicians in the health departments vary from $900 to $1,200 for the same time. In smaller cities the difference is still more marked. There is no reason for this state of affairs, but that physicians underrated their own services. There is no remedy for it but through the profession. In the past it is possible many doctors underrated their services because they obtained their education in a very short time and quite inexpensively, and so valued their knowledge accordingly. Now with higher entrance requirements and four years in a medical college with all extra expenses, as a mere matter of investment a higher rate should be demanded. I have also thought possibly that a conscious lack of real training has led conscientious physicians from charging more for their services. So today a great deal of advice is given free by doctors, because they fail to fully realize its importance and value to the patient, as it is such elementary knowledge to the practitioner himself. Especially is this the case when simply expressing an opinion. The idea that we are a liberal profession, and also charitable, has led others to charge rates below worth of services rendered. I cannot but think also the custom of treating the clergy gratuitously both cheapens medical services and lowers the self-respect of the clergy. The supply being greater than the demand, the applicants more numerous than the positions and the willingness of the profession to accept inadequate pay, has led public officials to underrate medical knowledge, and thus the compensation of the medical attendants in all state institutions is very low when the training necessary and services rendered are considered.

The laborious yet gratuitous services

to hospitals and eleemosynary institutions by the medical profession has also made public officials undervalue their services. I know of no just reason why a physician or surgeon should render entirely gratuitous service to a hospital when a lawyer charges the same institution. Many doctors seek these positions because of the supposed advertisement or that it may increase their practice or place them on a higher plane than their fellow-practitioners or some such unworthy reason. After thirty years active work in a number of hospitals I wish thoughtfully to say that the practical advantage of such work to a diligent physician, who is not a teacher, is wonderfully overestimated by the profession. The time consumed, absence from office, and study, outweigh the advantages of the large practice, while hospital methods cannot be successfully transferred to the home or private practice. I might add, it used to be the staff alone that had the privileges of hospitals, but now in order to secure his influence an outsider receives more courtesies and as many privileges as if he were serving the hospital for nothing, for there is a real rivalry between hospitals. These institutions have changed greatly. When I first served in them they were for the poor and unfortunate, with but few, if any, private rooms. Now they are but luxurious, fashionable invalid hotels, with possibly charitable annexes. Yet in many cases their managers still expect gratuitous services from their staff. Why a patient who can afford to occupy a private room in a modern hospital should not render some compensation to his physician is beyond my ken. A friend of mine recently found one of his wealthiest patients in a private room in a hospital he was attending, and was required to treat him without pay! He promptly resigned from that staff. Would that all others had the same good sense and manhood. Can you wonder that the governments underpay their medical officers? So, also, these very hospitals, by receiving state or charitable aid, are able to underbid a private surgeon and force down medical fees, yet the medical profession fosters this gross injustice. The free dispensary abuse is a well-known example of the lack of business foresight in the medical profession. Its shameful abuses have been thoroughly exposed and need not be dwelt upon here. The fault is ours. The remedy is with ourselves, but so long as we hold our own knowledge and training so cheaply so long will the public authorities undervalue our services.

Pernicious Anemia Following Thyroid Enlargement.

By V. S. Merritt, M.D., of Haydenville, Mass., in the Philadelphia Medical Journal, April 18th, 1903.

Mrs. E. C., aged 43, occupation housewife, consulted me on April 5, 1902, complaining of marked dyspnea on exertion, weakness and enlargement of thyroid gland.

Family History:—Father died after fracture of the leg, multiple sarcome probably developing at site of lesion, and on frontal and parietal bones. Her mother is living and well at the age of 84. One brother died at 35, of chronic nephritis, one living and well, but I am told is mentally deficient.

Past Medical History:—Menstruated first at 14, always regular until one month ago, when menstruation ceased. The last period was characterized by the menstrual flow being very pale in color. Has had no miscarriages. Labor was normal and recovery uneventful. Four years ago she had nervous prostration, due to overwork and worry. Patient was exceedingly jealous in disposition, manifested especially toward her husband. In June, 1899, the patient was in a runaway accident, thrown from a carriage and badly frightened, but not physically injured. In August, 1900, she first noticed the enlargement of the thyroid gland.

Present Illness:—Began one year ago, as dyspnea on exertion, with palpitation. After treatment, continued for some months, these symptoms subsided, but for the past few weeks there has been a recurrence with progressive increase in severity. There never has been any subjective ocular symptoms.

Present Condition:—Patient was a tall, well-formed woman, of light complexion, blue eyes, not emaciated. Countenance cheerful, skin white, some anemia present. Examination of lungs was negative. Examination of heart showed apex-beat in normal location, strong and forcible in character. On auscultation a rough murmur, presystolic in time and not transmitted, was heard at mitral area. Liver dulness normal. Above the clavicle, on the right side of median line, was a noticeable enlargement of the thyroid, of about the size of a hen's egg, moving with deglutition, of marked density and without sense of fluctuation. Patient's speech was markedly slow, but deliberate. Tonic treatment instituted. On April 20, I called at patient's house and found that she had progressively lost strength. At this time her skin had assumed a lemon-hued tint, and the ocular conjunctivae were markedly anemic; constipation was marked and she slept badly. On May 4, I examined the blood microscopically and found the red cells apparently less than normal in number, marked poikilocytosis, the pear-shaped forms, the rod-like, together with megalocytes and nucleated cells were present. The white cells were apparently smaller in size than normal, but not diminished in number relatively. Not having facilities for blood counting I was unable to obtain knowledge which would no doubt have been of interest. At this date weakness was pronounced, gastric symptoms had supervened, and there was marked dyspnea and palpitation even upon the slightest exertion. Pulsation of the carotids was very noticeable, as well as epigastric pulsation. Hemic murmurs at the base of the heart were very pronounced. By use of Fowler's solution with beef extract, the gastric symptoms were somewhat alleviated. May 8, Dr. George D. Thayer, of Northampton, Mass., saw the patient with me and confirmed the diagnosis of pernicious anemia. Prognosis was considered to be grave. For the next few days following there seemed to be some improvement, slightly better color in the face and less dyspnea upon exertion and better rest at night. The thyroid enlargement was progressively growing less, and patient stated that she experienced no disagreeable symptoms from it. The hemic murmurs and carotid pulsation were less pronounced. Following this period of apparent improvement there were a few days when condition seemed stationary, then weakness and dyspnea became more pronounced, restlessness and nervousness at night very annoying and gastric symptoms distressing. May 29, patient began to menstruate, period lasting for three days, color and quantity normal. From this time to June 21 the course was progressively downward. On this date she had persistent vomiting of fluid, greenish-yellow in color and odorless. At this time she was unable to speak above a whisper. Following this she had increasing rapidity of respiration, slightly stertorous, usually 36 to the minute, continuing to the end, which came on June 22.

During the first part of her illness the pulse-rate was 100, later becoming 108 and 112. Temperature usually from 99 to 92 2-5 degrees.

During the progress of the case there never was at any time edema of the extremities or of the face, and the urine was negative. A few days before death there was numbness and inability to use the left arm, continuing for a few minutes only, and at times there was slight involvement of facial muscles of left side.

Interesting points are: (1) Fright as a possible etiological factor; (2) coexisting goiter, which became less pronounced as disease progressed; (3) menstruation again established after cessation for two months.

There might be a question as to whether this was a case of exophthalmic goiter, followed by anemia. I cannot say as to presence of retinal hemorrhages, as the eyegrounds were not examined, but the objective symptoms of Graves's disease, other than the presence of goiter, were not distinctive. There might be a question as to the apparent menstruation, but as there was no hemorrhage from other mucous membranes the inference that menstruation was actually re-established seems to be justified.

The treatment was Fowler's solution is ascending doses, together with beef extracts.

An Address

Delivered Before the Medical Alumni Association of Harvard University, by Hon. Moorfield Storey

Continued from August.

Now bear in mind that your first duty is to examine the facts, and to make your examination just as minute just as thorough, as you know how to make it. There is nothing, however unimportant it may seem to you at the time, that may not, perhaps, when coupled with other facts, have a bearing upon the issue of the case. If you are making an autopsy, be sure that nothing in the body's condition escapes your observation. Examine the surface, look for every indication of violence, every disturbance, every bruise; examine all the internal organs. Do it with absolute thoroughness. You can never tell what little mark, what abrasion, what physical appearance, may have significance when the case comes to be tried. So your first duty is absolute thoroughness. I could tell you a great many stories illustrating the importance of very small things. I remember one that has not much to do with the medical profession, but it merely illustrates how a small thing may count. It was told me by the late Judge Hoar. He said that he was presiding at the trial of a burglar, and the evidence was that a masked man had broken into the house and had taken some property; but there seemed to be nothing to identify the criminal with the defendant. And he sat there, and the district attorney kept putting in evidence that did not seem to have a bearing one way or the other; but, finally, when a witness was leaving the stand, he said to him, "Did you notice anything about the room?" "Why, yes," said the man, "there were some burnt matches; and I picked up two or three of them." "Did you find anything in the pockets of the defendant?" "Yes, I found this." And the district attorney, taking the two pieces of matches handed him, which had been picked up from the floor, put them with that found in the pocket; and they fitted exactly—and they convicted the man. He had used matches to find his way in the dark; and he had thrown away the stumps; the remainder of the card was in his pocket, and the fit was exact.

You may frequently find some little thing in the same way that is of vital importance; and it is your business to make sure that no symptom and no fact escapes your observation, if it is possible.

In the next place, when you are called into a case, as you frequently may be, perhaps by counsel, perhaps by prosecuting officer, perhaps in various ways,—do not start with what is believed by your employer. In other words, he has a theory. Never make your examinations with any theory. Never allow yourself to be biassed. Determine as far as possible, to free your mind from any preconceived notion. Find the facts exactly as they are. The moment you undertake to examine with a bias, that moment your examination is likely to be untrustworthy. It is the bane of all scientific investigation that, when a man has a certain theory and is making experiments in order to prove it, he is apt to ignore those facts which tell against his theory, and to lay undue emphasis upon the facts which count in his favor. The history of every scientific discovery is attended by more or less evidence of that tendency.

Now, when you are called upon to investigate, do not go into the case with any preconceived theory about it. First master your facts, and content yourself with stating what the facts are. The theory will be taken care of at the trial of the case.

It is astonishing to what an extent men find what they look for. I remember being, a good many years ago, called into court suddenly by the information that a classmate of mine wanted to see me. I found sitting in the prisoner's dock a man who is today editor of one of the large New York dailies. I found he was charged with assault with intent to kill; and the facts were that he had gone with a friend to dine at the Revere House, and on their way through Court Street his friend stopped at a cigar-shop to buy some cigars. While he was chaffering with the man behind the counter, my classmate turned to the opposite counter where some pistols were lying. He took up a pistol and looked at it,—loaded it to see it work. He then turned round to his friend, and said, "What do you think of that?" His friend said, "I don't think much of it." The other replied, "I rather like it: have you got $10?" His friend answered, "No." Thereupon the pistol went off. The bullet passed through this man's lungs, grazed his heart, and fell down in the abdominal cavity; and my classmate was arrested on the charge of attempt to kill.

I went down to see the man who sold the cigars and the man who sold the pistol, and he told me the story just as I have related it to you. He said, though, "It did not look to me much like an accident." I asked, "Why not?" and he replied, "The way he behaved after the occurrence." I inquired "What did he do?" and he said, "He did not seem to try and help him at all, but just marched up and down, saying, 'My God, my God! what have I done?' You don't see a man act that way when there has been an accident."

This merely goes to show that you may find evidence where least expected and illustrates the importance of making diligent inquiry even if the conditions are not promising.

"In the next place, he must guard himself against hasty inferences; and that is a danger to which intelligent, educated men are more prone than the more ignorant classes in a community. The best witnesses that I have ever seen have been some of the least educated, because they tell you exactly what they saw, and they do not draw inferences; but the highly educated man sees one thing and immediately infers from it a long train of consequences, and, when he is turned into court, he tells the inferences, and often entirely forgets the facts.

Now that is the danger you doctors will be exposed to. Make yourselves as far as possible eyes and ears,—see and hear accurately the facts. Free yourselves from incidental bias, from hasty inferences.

Then, after you get your facts, record them at once, and fully. Do not trust to your memory. When you come into court and are exposed to a sharp cross-examination, you will find that the record you made at the time of exactly what you saw will be of very great value. Mere memory is a very uncertain thing; and the memory of the business man, the memory of any man as he grows older, is less and less reliable.

The tricks that memory plays men are very amusing. I was talking some years ago with a distinguished officer in the War of the Rebellion who told me that for twenty-five years he had told a story of something seen in the war, and that it was his favorite story. But he happened to look up and old diary, and he found that on the day when the thing happened he was fifty miles away from the spot. It had been told to him when it was fresh, and his memory had made him an eye-witness of what somebody else had seen.

But the differences between the length of a cut, whether it is this length or that length, its exact position, the appearance of a wound, a great many symptoms and signs which are important, a busy man will forget unless he has made a minute of them. And my advice to you is that, just as soon as you complete your observations, make your record in full. Do not spare pen, ink, or paper. Take time enough and room enough to make full memoranda of what you have seen. You will find, if you follow this advice, that it will be of very great service to you.

Now, having made your investigation and recorded its results, you perhaps for the first time come in contact with a member of my profession, and he wants to know what you have got to say. Make up your mind to tell him exactly what the facts are, and exactly what your opinion is, and stop there. I do not mean to say that, if he calls your attention to facts which you have overlooked, to facts which have come to him from some other source which modify your conclusions, you should not allow that modification to be made; but don't let him argue you into changing your opinion.

If he comes to you and tells you, "Well, that opinion is not going to help very much: I am afraid you will not be a very good witness for my case," do not say, "Possibly I might change that particular statement; I am not so sure of it as I was; and, possibly, if I leave that fact out, it may help you better."

I remember having a very distinguished doctor, an expert on insanity, before me for examination. He had previously been the attending physician of the gentleman whose representative I was; and he had written a letter to me or to my predecessor, in which he stated what his advice had been, and the question was whether that man was competent to make a contract.

I was thinking of calling him as a witness on my side of the case; but, when I was putting in my evidence, I observed him come in and take a seat with the opposing counsel. So I concluded I would not call him. He heard all our evidence, and then took the stand and testified that from his knowledge as attending physician, my client was entirely competent to make a contract. Well, I cross-examined him; and I said, "Doctor, you are a specialist in mental disorders, are you not?" He answered, "Yes." "You are very rarely called in any other class of cases?" A. "I don't remember that I have ever been at all." Q. "You were called in this case?" A. "Yes." Q. "Do you remember what advice you gave when you were first called in it?" He answered that he was not absolutely sure. "Do you remember saying that your first advice was that my client should be placed under guardianship, because he was incapable of taking care of himself and his property?" He didn't remember that exact statement. I said, "Doctor, did you write that letter?" and showed him his letter in which that was the first statement; and there were various statements equally damaging.

I walked down stairs with that doctor after the trial, and the only effect that was produced on him by that exposure was this. Said he, "Mr. Storey, if I had known I was going to be called on the other side, there were some statements in that letter I should have changed."

It is that class of malleable, India-rubber experts which brings your profession, gentlemen, into more or less contempt when you take the stand.

Do not let a lawyer try to make you, when you would be a witness against him, into a witness in his favor; and, above all, if he says to you, "Unless you are asked the question, you need not allude to that fact," don't let him persuade you to conceal any fact that you think material to the case because it is going to hurt his side of it. You are the witness of the court. You are there to see that justice is done, so far as you can; and it is your business to tell the exact facts.

There is another thing which you ought to bear in mind; and that is, don't overestimate the intelligence of the lawyer. Do not overestimate his knowledge of the medical profession or of medical science; and, if you have reached a conclusion which sustains his side of the case, if you have got facts which prove that his client is in the right, if you have an opinion which will sustain his theories, do not trust him to get those facts and that opinion out of you. Tell him all that he ought to know. Tell him what questions to ask. Advise him thoroughly.

I met in the cars night before last a very distinguished doctor of Boston, who said that he had just come from attending court; and he said that it looked as if the case would go against his employer simply because his lawyer did not know how to bring out the facts. He did not ask proper questions.

The question being asked if such and such things were necessarily symptoms of tuberculosis alone, the answer was, No. What he wanted to bring out was the fact that there were certain other symptoms coexisting with those symptoms which showed tuberculosis, to make the case clear; and the lawyer did not know enough to ask the questions. So, I say, you must not overestimate the knowledge or intelligence of the lawyer. Give him all the instruction that he needs, and in that way you will help him very much.

Now, then, having instructed the counsel who is going to call you, having told him exactly what your testimony is going to be, the next thing you know is that you are summoned into court; and the first thing that may strike you is that it is pretty tedious business. You are summoned to be there Monday morning at nine o'clock; and, after waiting until Tuesday, at three, you are told that you may go until Thursday at ten, and so on. (Laughter.) And you think that is the fault of the lawyer, but it is just as annoying to him as it is to you. It is the result of having too many people who want their cases tried, and the uncertainty of how long each one will last. They put several cases on the list. The first will take an hour; the second may perhaps take two days; the third perhaps does not come off at all because counsel are in another session. So you may be there, and perhaps you will not be called for a week or for two weeks.

That is a good lesson in patience. All I want to ask is your indulgence to my profession when you find yourselves in this situation, and to bear in mind that it is as annoying to us as to you, and even more so, because we know we shall be there when we are wanted, but we are not by any manner of means sure that you will be. So we are in fear that our witnesses will step out of court, and the mental strain on us is much greater than the strain upon your patience.

Now, when you come to the stand, remember that a doctor is not necessarily an expert on any question which may be asked. There are a great many things that a doctor knows, just as any human being knows; that is to say, those things which come under his observation. The distinction between those things to which the doctor is obliged to testify as an ordinary witness and those things for which he is entitled to charge the expert's fee may be stated thus:—

If knowing nothing about the case, he is obliged to inform himself as to the facts, to study the case, and to testify as to opinions, he is an expert. But, if he is called up to give an answer to such questions as Did you attend So-and-so on such and such a day, at what hour did he die, or, what was the cause of his death? that is not expert service, but the service of an ordinary witness. A great many doctors are prone to think that because they are doctors, no matter what they are called upon to testify, they are experts, and entitled to payment as such; and this is a distinction you do not want to overlook.

In the next place, you must bear in mind, as I said before, when taking the stand, that you are absolutely impartial as between the parties. It does not make any difference to you which side wins. You are not the lawyer. It is not you who argue the case. It is your business to instruct the court, to instruct the jury, to tell them the facts within your knowledge; and the consequences, whatever they may be, are for the court, not for you.

Be cool, and take plenty of time. Don't be hurried. If a man asks you a question you do not understand, don't hurry to answer it; but be sure you understand it before you answer. You have a right to that. Do not hesitate at all, to say, "I don't understand that question," and then answer it deliberately and fully.

When you come to be cross-examined, bear in mind what your rights are. If the question put to you is misleading, so that an answer such as counsel seeks to make you give would mislead the jury, say so. Make your own answer. You are there to inform the jury. The question is a mere vehicle. It is your answer which is the evidence. Now make sure that that answer is not misleading, and that no combination of question and answer puts you in a position where you will mislead the jury by your answer. If a man says, "Now answer that question Yes or No," and either of them would be a misleading answer say so; and the court will say to you perhaps, "He is entitled to that answer." Say to the court: "If I give either of those answers, it won't be true. I will give an answer, provided I can explain," and the judge will undoubtedly give you the chance to explain.

There is a favorite illustration to show that the answer Yes or No is not possible in every case. It is where Lord Russell asserted that, when trying a case, any question could be answered Yes or No. Thereupon counsel for the other side said, "Have you given up beating your wife?" (Laughter.)

Now, when you come to testify, do not use technical terms. Remember that you are trying to instruct the court or the jury, and use the language that they use. A good many doctors seem to think that they are, on the whole, passing an examination before some medical professors, and that they have got to use the language that they would expect them to use.

I remember a great many years ago, before the grand jury, having a witness testify in some assault case, in which he said that the epidermis was disintegrated upon the tibia. Said I, "Do you mean that he barked his shin?" (Laughter.)

Barking the shin carries information to the jury, whereas the other does not. A cut is a great deal better than "incised wound," a bruise is better than a "contusion." Take the language that the jury uses, as you would speak French to a Frenchman, if you knew how, and do not undertake to address Frenchmen in English or a jury in scientific terms which it cannot understand. It will always prejudice the jury against a witness, whereas the other course wins their confidence and respect. It is a simple thing to do, and you will be wise if you do it.

In the next place, do not try to be smart. Do not try to get any rises out of the counsel. Counsel are often very ignorant, and they will often ask you very ridiculous questions. Answer them simply and pleasantly, but do not try to make fun of their ignorance, because the jury, which is just as ignorant as counsel, are very apt to sympathize with them under those circumstances. What seems to you very ridiculous on his part seems to them only natural, and they rather resent any attempt to read him a lecture in their presence or make a joke at his expense. It was said of a very distinguished lawyer, up in Worcester county by an opponent, "It is extraordinary how he always misunderstands a case." "Yes," said another, "he always does misunderstand it; but you will find he always makes the jury misunderstand it just as he does."

Remember, also, that the man who is asking the questions has an enormous advantage, and if you want to get a fall out of him, he will be apt to lie in wait for you, and return the compliment. It is never safe to interrupt a man while he is one his feet. His head is full of blood; his brain is working as well as it ever will; he has the floor, and that is an enormous advantage, and if he really sets himself to do it, he can generally get the advantage of a witness, unless the witness preserves his dignity, is perfectly simple, perfectly straightforward, perfectly polite and courteous. Those are the witnesses upon whom counsel fail to make any impression.

Just bear in mind, then, that if you know what you are about,—if you know your case, know your facts, have carefully fortified your opinion, and confine your statement exactly to what you have seen and heard, giving your opinion just as it is, quietly, simply, good-naturedly,—you are a match for any counsel you will ever meet.

But the moment that you undertake to put on airs, the moment that you lose your temper, the moment you try to be pert or smart, the moment you are hurried, the moment you undertake to talk about something that you do not quite understand, the moment that you are a partisan, trying to conceal facts that make for the other side, you are at the mercy of the counsel.

These are simple rules, gentlemen, and you will do well if you remember and observe them; and in any important case, when you are in trouble, ask the court for instructions. The judge is there to see that you get your rights, and that is one of the things that may well be done.

It seems to doctors, sometimes, that lawyers are their natural enemies, but they are not. They are doing their work in their way. The expert on the stand is like any other witness. He is there for one purpose: they are there for another. He is there to tell the whole truth: they are there to present one side of it. They are sure to bring out from the witness, if they can, all those facts which make their way. They expect counsel on the other side to bring out the corresponding facts, and this difference of purpose sometimes brings about a conflict of opinion between counsel and witness; but you can meet it by simply following the rules I have suggested.

Now sometimes, smarting from the conflict in court, doctors—and sometimes lawyers—think there should be some better way than the existing method of expert testimony. There should be some other way of reaching medical facts; and it is suggested, perhaps, that there should be regular witnesses or that cases which involve medical questions should be sent to some doctor for examination.

Think for a moment of the system we have now in Boston,—four courts with four juries, sitting day in and day out for about nine months in the year, practically trying accident cases which involve medical testimony. And we have two or three courts where judges sit without juries. Against the Elevated Railroad alone, there are perhaps one hundred claims on account of accidents every day,—some honest, some not. And all the steam railroads swell this list, of course.

Any regular witnesses, any regular medical experts, would simply have to abandon the practice of their profession and attend court instead. You would have a number of men doing nothing else, and that would mean that they would soon lose that practical knowledge of professional questions which a man ought to have to keep up with your profession. I understand that you have to study and practice constantly day in and day out, all your lives long, in order to keep up with the constant discoveries in medicine and surgery. I have heard, for example, of English surgeons complaining bitterly because they were obliged to leave the hospitals after thirty years' practice, and give up the experience that they got there, so that the leading English surgeons, with all their knowledge, feel the necessity of constant practice. That is a familiar truth to you all.

Now the man whose business it is to act as a witness would be cut off from that. We should soon have professional witnesses; and they would soon get hackneyed,—indurated, so to speak. They would have a steady method of testifying in certain cases, and they would not satisfy those who are seeking justice.

The truth is, gentlemen, that your constant discoveries bring you more and more into court. The number of accident cases is now altogether out of proportion to the increase of population. If you take the reports of 1860 and read the number of accident cases, you will find that there were very few. You take the reports of today, and you will find a large majority of accident cases. It is because, for example, you have discovered what terrible consequences arise from nervous shocks. Formerly, unless a man showed some signs of injury, he did not bring a suit. Now in appearance he may be entirely unimpaired, and yet be a candidate for the largest verdict a jury can render. Some old-fashioned doctors lose confidence in cases of that sort, but that will not satisfy counsel. He will find some more advanced student of nervous disorders who is prepared to say that, while that man looks well, he is, in fact affected by a shock that will after so many years incapacitate him: in fact, he is a nervous wreck, and that testimony will be had.

You are all familiar with the fact that the discoveries of medical science are not at once accepted by the medical profession. You have only got to go back to 1872 to find the theories of Pasteur denied by his colleagues in France, which are now accepted by all. Suppose a question had arisen then, the doctors would have said there was nothing in certain symptoms, while Pasteur would have seen much. It would be unjust to deprive a party of the chance to call a Pasteur, and compel him to accept the opinion of some inferior doctor. And there are distinctions of that sort constantly, and so it is with mental disorders. Our hard-and-fast notions in regard to mental capacity are constantly being shaken. There is no man now who commits a crime who is not at once suspected of being mentally incapacitated. Now an accused person has a right to the very best help that the most trained and modern doctor can give him, and he is sure to get it, you cannot deny; so that any system of trying a case, either by regular witnesses or by some medical magistrate who heard part of the case, would be found in practice likely to consume more time and produce less satisfactory results than the present system.

It would be well, I have no doubt, in a certain class of cases, if that could be done; and the power is in the court now.

The court can appoint a doctor to try the experiment. It only requires the consent of the parties to have it done; but I am satisfied that, if you will think the matter over, you will find it extremely difficult to provide any permanent court of medical assistants, whether in the form of witnesses or assistant magistrates, that would dispense with the present difficulties attending the decision of medical questions.

The real remedy, I think, is the remedy I have pointed out; and that is, to have a doctor forget which side he is on, and remember only that he is the servant of truth,—that he is there to state the exact facts, no matter whom they hurt or whom they help.

There are lots of unscrupulous lawyers, and they do this community, and every community where you find them, enormous harm; but their power for mischief is enormously increased, if there are associated with them unscrupulous doctors. The lawyer who is prepared at any moment to bring a case against a great incorporation, and who finds a doctor ready to come into court and swear that his client has been hurt, for a while has great success; and there is a great temptation undoubtedly to a great many doctors, who see in the expert fee an immediate source of revenue, to make themselves useful to the counsel who calls them, to suit their opinions a little bit to the exigencies of the case,—to the requirements of the counsel who asks them to serve.

In that way they get the immediate fee, but it is a very short-lived career. I have seen many and many a lawyer start, and for two or three years have apparently brilliant success, and then pass completely off the stage. I have seen eminent doctors, men of high standing in the profession, allow themselves to be made the facile experts of certain counsel, and gradually lose their standing, their reputation, their practice, and finally the chance to testify.

The life of either the unscrupulous lawyer or the unscrupulous doctor is inevitably short. It has but one end. And, while it may take you longer to acquire a recognized position as expert, if you adopt the rules I have suggested, yet when you have got it, it will be a lasting possession. It will last as long as you live, and be of infinitely greater value than any temporary success you may win.

There is one rule which applies just as well to the medical as to the legal profession, and it is all summed up in the advice that Charles Sumner gave to the young man,—"Remember, young man, that character is everything!"

Medical Miscellany

MAKING THE SCULPTURE

How the Decorative Statuary of the World's Greatest Exposition is Produced.

St. Louis—The sculpture for the decoration of the buildings and grounds of the Louisiana Purchase Exposition is first modelled in the studios of the different sculptors commissioned to do the respective works and is then enlarged or "built up" in a large workshop at Hoboken and at the World's Fair Grounds in St. Louis. The work of enlarging requires the services of a large force of men and makes a busy industry. Many of those so employed are students and young sculptors who thus obtain a livelihood while studyjng art and at the same time have an opportunity to make progress in knowiedge of the art of sculpture and skill in modelling.

The preparation of the decorative sculpture for so vast an exposition as the World's Fair at St. Louis is a monumental task. It engages the attention of over 80 sculptors, besides the large number of men—about 90—employed in the enlargement work. This activity goes on under the direction of the well known sculptor, Karl Bitter, who is assisted in the discharge of his important task by an advisory committee on sculpture, composed of Daniel C. French, J. Q. A. Ward, and Augustus St. Gaudens. This committee inspects the sketches submitted by various sculptors and passes upon the enlargements made for decoration of the grounds of the Fair. The committee reports that the work is advancing rapidly and satisfactorily. The designs show originality and are of a high order of merit. The designs themselves compare most fovorably with those made for previous expositions and the enlargement of the sculpture is done with more skill than ever before.

Fourteen great carloads of sculpture have already at this early day been shipped to St. Louis from the workshop at Weehawken and the fifteenth will soon be on the way. The recent shipments contained sculpture by Isidore Konti, Charles Albert Lopez, A. Reul, A Alrano, F. W. Ruckstuhk, A. A. Weinmann, Miss Melva Wilson, Sterling Calder, George Edwin Bissell, Phillip Martini, A: Zeller, J. S. Hartley, A. Royal, Albert Jaegers, and L Amateis.

Editoral on "Picratol".

We have reason to believe our numerous readers will be much interested in the announcement on "Picratol" appearing on another page. This is a Trinitrophenolate of Silver and has been introduced by Messrs. John Wyeth & Brother. Picratol is a true and definite chemical Salt of Silver, containing 30 per cent Silver held in loose combination. It possesses alterative, analgesic and non-escharotic properties and is especially directed to the varied pathological conditions of the mucous membranes. A high and exceptional degree of efficiency is claimed and proven by clinical demonstration and observation in private practice and in all stages of membranous inflammation tending to a suppurative process, Picratol will exert prompt action on the germicidal origin. Employed with discrimination and perseverance it is likely to supplant Nitrate of Silver and the indefinite Albuminates of Silver in the treatment of mucous surfaces.

After the removal of alcohol, Celerina given in doses of from one-half to one ounce every four hours, is speedily followed by the most characteristic symptoms of improvement.

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NERVE CALMATIVE
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follows its use.
Dose: Teaspoonful every half hour until nervousness is abated, then four times a day.
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Hysterectomy for Cancer of the Uterus, by Earnest W. Cushing, M. D., Boston, Mass., Professor of Abdominal Surgery and Gynecology, Tufts Univerity.

Dyspepsia and Nervous Affections

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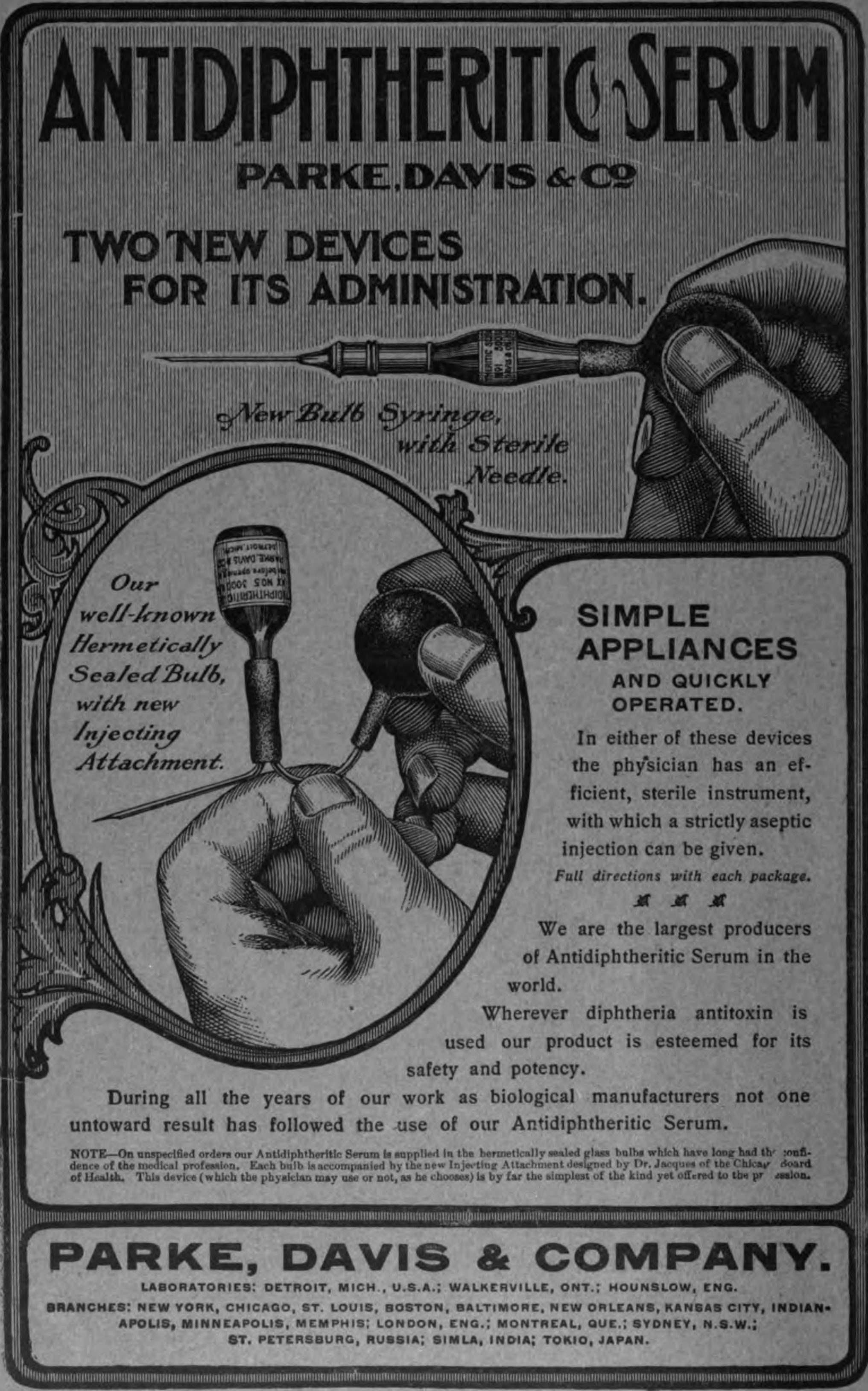

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Editorial.

ORAL HYGIENE.

The National Dental Association at the recent meeting held at Asheville, N. C. passed the following resolution:

"Resolved, That it is the sense of the 'National Dental Association' that each Medical College in the United States should include in its curriculum a lectureship on 'Oral Hygiene, Prophylaxis, and Dental Pathology.' "

The dental profession feels that with the introduction of the teaching of Oral Hygiene in the Public Schools, which they are striving to accomplish, and the co-operation of medical men who have been specially instructed on this subject, a great stride will have been made toward the prevention of caries of the teeth, not to mention many other good results to the general system, which would surely follow a better care of the oral cavity.

In the suit of Mrs. Ada Nichols against Dr. George G. Eitel of Minneapolis, for an operation in which it was alleged that the doctor, while she was under the influence of an anesthetic and contrary to an agreement with the surgeon, she was disfigured for life, "under color of an employment to merely make an incision to heal a soreness."

Dr. Eitel, in his answer, denied these allegations of the complaint and alleged that Mrs. Nichols had a cancer which at her special request he removed in the regular manner universally approved by skillful surgeons.

Judge Brooks has ordered judgment for Dr. Eitel on the ground of statute of limitations, more than two years having elapsed before commencing her case.

Hamline Medical College Commencement.

The opening lecture of the Medical Department of Hamline University was given on Thursday evening, Sept. 17th, at the college building by Prof. Charles W. Malchow, M. D., before the Faculty, the students, and other friends of the college. The address is given in full in this number of the Dial, and speaks for itself. It will be evident to the reader that Dr. Malchow has profited by the course of study and discipline he has so thoroughly outlined for the medical student to follow to insure success. Dr. Malchow is a graduate of this medical school in the class of 1894.

The Present Day Treatment of Carcinoma of the Breast.

It is interesting to look back over the past quarter of a century and note the changes which have taken place in the operative treatment of carcinoma of the female breast.

While it was generally admitted that excision might greatly prolong life, if not actually lead to a radical cure, it was also believed that such happy results were rare and therefore exceptional. Gross in his edition of 1872, after weighing the statistics on the subject uses these words: "To sum up the whole matter, it may confidently be asserted that the knife, if it does any good at all, is only a means of temporary relief, generally, indeed, of a very transient character."

The operation in vogue at that time was spoken of by Gross as "generally a very easy and simple affair." It consisted in making an eliptical incision, if possible in the direction of the fibres of the pectoralis major muscle. Care was taken to preserve enough skin to allow parts to come together without stretching in order to secure, if possible, union of the wound by first intention. The first improvement on this simple technique was suggested by Charles H. Moore in a paper read in 1867 before the Royal Medical and Chirurgical Society of London, in which he urged the importance of removing together with a diseased breast any tissue adjoining the breast which is even approached by the disease, e. g., skin, fat, lymphatics and the pectoral muscles. This paper was followed ten years later by that of Mitchell Banks of Liverpool, which dealt in a more practical manner with the involvement of neighboring texture. He insisted that whenever there was found an appreciable disease in the breast, the axillary lymphatics and glands were to be regarded as already involved, and whether enlarged glands could be felt or not, the fatty and glandular contents of the axilla should be systematically removed in every case as a part of the removal of a cancerous breast.

For the next step we are indebted to the German Surgeons Volkman and Küster the former in 1882 and the latter in 1883 advocating the dissection from the surface of the pectoralis major of the fascia covering it. In the United States about the same period Gross (the younger) was working along the same lines.

Not satisfied with removing the fascia covering the pectoralis major, Herdenhain became convinced that the carcinomations process pervaded the whole breast in which any part was affected and at the German Surgical

Congress in 1889 argued that it was impossible to remove the fascia without leaving some fragments of it which contained the disease. The muscle as well as the fascia covering it, the parts overlying the muscle and the axillary contents must be removed in every case of excision of the breast for carcinoma.

Halstead, availing himself of the advances made in England and Germany, devised the operation which has taken his name, and as a further means of getting rid of all diseased tissue removed a considerable portion of the skin over and about the morbid growth and in many cases invaded the region above the clavicle. He published in 1894 the results of his operations at Johns Hopkin's Hospital.

Dr. Lewis Stephen Pilcher (Annals of Surgery, September 1903) gives the results of his experience in fifty cases operated on in accordance with the views of the most advanced surgery. He classifies his cases according to the extent of the operative procedures resorted to as follows:

1. Ablation complete to apex of axilla, without removal of any pectoral muscle. Two cases.

2. Ablation complete to apex of axilla with removal of pectoralis major muscle only. Eleven cases.

3. Ablation complete to apex of axilla, with removal of both pectoral muscles. Twelve cases.

4. Ablation complete to apex of axilla, with removal of one or both pectoral muscles, and invasion of the supra clavicular region. Eighteen cases.

This list does not include cases in which an operation had already been done and a secondary operation was resorted to. Numerous cases of this class had been operated by Dr. Pilcher but in no instance had success been attained.

Of the thirteen cases in classes 1 and 2 four have remained well to the present time, periods of from eight to ten years; three more enjoyed a period of immunity lasting for six years, and then in each case developed renewed cancerous disease; in three others evidences of recurrence in distant regions, showed themselves within three years after the operation, in two of the cases there was local recurrence.

When it is borne in mind that these operations were not so radical as they might have been, the results are encouraging.

In class 3 both pectoral muscles were removed owing to the advanced stage of the disease another necessity of facilitating the thorough removal of the of the axillary contents. Twelve cases fell into this class and their course is very instructive. One lived 5¼ years after the operation free from recurrence and then died of acute pneumonia at the age of Seventy. Two others are well at the present time, 3 years and 3 years and 4 months respectively after the operation. One is living 5½ years after operation, but with slowly advancing recurrence in axilla and above the clavicle. One other is living 3 years after operation without external recurrence, but with evidence of cancer of liver. Six patients have died at periods varying from 1 to 5½ years after operation. In all but one of these the disease first reappeared in the supra clavicular region. So frequently did the disease spread to the lymph glands above the clavicle that Dr. Pilcher has come to the belief that the supra clavicular lymphatic tissues are diseased in all cases in which the glands at the apex of the axilla are markedly affected and if such is the case the proper thing for the surgeon to do it to open up the supra clavicular spaces and clean them out in the same manner as is done with the axilla.

One of the most important points in the treatment of cancer cases is the early recognition of the disease and this should be followed by prompt action. Of the fifty cases reported by Dr. Pilcher 37 had postponed application for surgical relief after they had become aware of the existence of the disease for periods varying from six months to three years or more.

Original Articles

Opening Lecture of the Medical Department of Hamline University by Prof. Chas. W. Malchow, M. D.

Mr. Dean, Members of the Faculty,
Students and Ladies and Gentlemen:

It has fallen to my lot to address you upon this occassion, and, inasmuch as this is the opening of another session in an institution for learning, it seems fitting to consider at this time the question of the "Acquistion of Knowledge", and more especially the cultivation of a familiarity with the technicalities so requisite to the proper equipment for the practice of medicine.

In the remarks to follow, I hope to avoid moving about in a very small circle and trust that what I may say will not appear quite so ridiculous and senseless as did the remark of the diplomatic Irishman with his pig, who, when the weight of the porker was made known to him, replied "well, he don't weigh as much as I thought he did— but then I didn't think he would".

There may be a grain of truth in this diction: "There is nothing new under the sun", but this indisputable fact remains, that there are as yet a great many things that are new to us, and there is still very much for all of us to learn.

We are what we are, physically, mentally and morally, by reason of heredity, environment and education. Over the first of these we have no control; the second permits of but partial variation, while the third is more largely the result of our own volition.

Knowledge is cognizance, information or knowing, if you please. We know nothing— except that which we have learned, and our knowledge consists of what we have acquired by personal experience together with that which has been imparted to us by others. The beneficent author of our being intended that we should be social creatures and receive the greatest and most important part of our knowledge by the information of others. If we were compelled to rely upon our own individual personal experience for information regarding diseases, most of us who still survive would scarcely know the name of the great majority of human affections.

All knowledge is not equally useful, but it may be said that none is altogether useless. To acquire knowledge it is necessary that we possess a receptive capacity, and have in addition a retentive ability. Memory is that faculty of the mind which enables us to retain and reproduce past impressions. It is therefore necessary that we must first of all be impressionable, or have a receptive capacity. The brain is impressed and stimulated to activity by means of several senses. A new born babe cannot be possessed of intelligence or knowledge, for its first movements are not controlled by will power at all, but are instinctive and subject to reflex exclusively. For a short time after birth, says Jacobi, the conducting fibres between the undeveloped brain and the pyramidal fibres of the cord perform no functions. It takes the psycho-motor centres a month to exhibit the first signs of existence. After this time the brain developes very fast, but far from uniformly. It has been noted that children who are born with a defective auditory apparatus which renders them deaf, are usually dumb as well, and their muteness is not due to any abnormality of the vocal organs, but rather to an inability to receive sounds, which prevents development and deprives the brain of impressions that stimulate repetition and imitation.

Mind, which will here be considered as the intellectual faculty in man, is extremely difficult of accurate definition, but is it not cerebration or what is evolved by the functioning of the brain? If mind is not the result of impressions, what is it? Certain it is that the minds of different people are as varied as their possessors, and since it seems that mind is cerebration, it follows that the development of intellect is dependent upon the impressions received by the brain. This receptive organ cannot become highly specialized without repeated impressions to stimulate its activity, and it must needs rely upon other organs for this stimulus, and thus special senses, which contribute to mentality, are developed.

By way of elucidation, permit me to say that the organs of taste and smell are situated at the entrance to the respiratory tract and elementary canal, and convey to the brain sensations that are agreeable or obnoxious; thereby enabling the person to avoid deleterious things as well as to seek those which are agreeable and, consequently, give him pleasure. Previous experience gives the required knowledge and creates the desire which a discriminating judgment has learned to gratify. I might add in passing, that people with acquired tastes habitually eat not the requisite amount or the proper kind of food for the building up of the bodily tissues, but partake of enormous quantities of both food and drink because of the satisfaction of their sense of taste. Indeed it is a common practice to indulge this sense to the limit of their physical capacity, and very frequently beyond.

Hearing is that sense by which we distinguish sounds and are able to enjoy the charms of music and harmony, but we must first have learned to discriminate between noise and agreeable concords. An untrained child does not receive the satisfaction from classical music that an educated musician enjoys because he does not possess the receptive capacity, and hence has not the same ability. It requires a knowledge of language and rhetoric to appreciate and be thrilled by the powers of oratory.

By the sense of sight we perceive the beauties of our surroundings as well as hideous things, and these are often pleasing or repugnant according to the previous mental training of the individual. The surgeon witnesses a brilliant surgical operation with keen interest and satisfaction, while the same sight is quite enough to frequently be the cause of sickness when viewed by a sympathetic member of the laity. A familiar scene depicted upon canvas might cause a thrill of admiration and awaken pleasant memories in the minds of the masses, while an artist would with disgust pronounce the painting a veritable daub.

The tactile sense, too, at times gives valuable information to the cultured brain, which by repeated application is enabled to draw conclusions that could not otherwise be deduced.

By repeated and persistent use of the several senses there is recorded in the numberless recesses of the brain, a fund of information which memory subsequently recalls, elaborates and utilizes. The mental effect caused by the developed special seems to be in proportion to the development of these senses. Profound impressions conveyed to the brain leave an indefinite imprint, and extraordinary sensations become ephemeral or enduring memories according to their intensity.

All this goes to show that knowledge must be acquired by oneself alone. There is no other way than by repeated, prolonged and persistent personal efforts. It cannot be purchased nor can the task be delegated to another, but each and every one of us must work, and work hard for its cultivation, and he who most assiduously applies himself and labors most faithfully for its attainment, will be most liberally rewarded. It is true that much depends upon opportunity and advantage, but these alone are of no avail, for they only serve to straighten the road and smooth the pathway leading to the goal.

In this enlightened age the successful practice of medicine depends upon two things. First and foremost, the possession of the requisite technical, scientific knowledge; and secondly, individual personality. It is the first, or the technical, scientific equipment which concerns us most and which we have to deal with more especially here.

I do not know that medicine as it is today is thoroughly scientific in every minute detail, nor do I know that it ever will become so, but each succeeding year sees the light of knowledge penetrate a little farther into the darkness and broaden the horizon, while an army of earnest scientific workers is constantly pushing on and in every direction, until already it requires a lofty eminence to enable our vision to encompass its circumference. To attain the eminence commensurate with the modern physician, in all that the name implies, requires many qualifications; the more important of which, it seems to me, aside from the very strongest of moral characters, may be mentioned the following:

1. A strong constitution with no faculty impaired.

2. Sufficient preliminary education to insure comprehension.

3. Capacity and inclination for work.

4. Extraordinary adaptibility.

It is difficult to conceive of a more noble, more honorable, more exalted or more responsible pursuit than the practice of medicine, if we choose to make it so; but if any of you have come here with the preconceived idea that the career of the practitioner is along a primrosed pathway to a downy couch of ease, you may be sure that before you have progressed far you will be ruthlessly disillusioned. People do not become conveniently sick, nor do they seek the doctor's aid or counsel except when driven to it by suffering and distress; while they have the habit of becoming needful at untimely hours, in inclement weather, at inconvenient distances and undesirable localities—

which circumstances would scarcely be compatible with a frail and susceptible physician. To have a normal, vigorous intellect, with a clear mind and good judgment, requires a healthy body with its various internal organs performing their several functions harmoniously. A deranged digestive apparatus profoundly affects the mental state. Not only is it necessary to be able to withstand hardships and endure physical strains, but the doctor should be in possession of every faculty and the more acutely these are developed the better will he be fitted for efficient work. A musical ear is a great aid in differentiating between the different notes elicited by percussion; good vision is essential for intelligent microscopy; digital examinations and palpation would be very unsatisfactory in the absence of fingers or a delicate touch; and detection of peculiar odors emitted during the course of various diseases would be difficult with the sense of smell impaired. And so, you see, a physical condition closely bordering upon perfection is of prime importance.

Without going into detail relative to the so-called fads in the local public schools, which is agitating the minds of instructors at the present time, it does seem as though a thorough familiarity with the three R's (readin', 'ritin, and 'rithmatic) is vastly more essential in the preliminary education of a professional man than a smattering of slyod, basket-weaving, beadwork, etc. Life is too short and too serious to spend a considerable proportion of it in acquiring dexterity in the production of useless knick-knacks that are scarcely ornamental. It is quite as easy to learn grammar and history in the little red school house of a remote rural district, as it would be in an imposing edifice amid palatial surroundings; in fact, it is more difficult and less expedient to seek a knowledge of anatomy and physiology, materia medica and chemistry in a far-famed distant institution with a thousand students, than find it in a smaller college where personal attention is practical and assured.

The mind must be in a sufficiently developed condition to grasp, retain and recall what is imparted to it in order to accumulate a practical knowledge, and this state is reached only after a prolonged discipline. Cerebral activity leads to reasoning power and this in turn is followed by a wise judgment. It is like sowing seed upon barren soil to attempt higher education where there has been but scant intermediary training. I am reminded in this connection of a story told about a venerable old bishop who prided himself upon his very learned sermons. It seems that one Sabbath he had mislaid his notes and in his dilema concluded to repeat one of his previous efforts. He was especially desirous of getting into the good graces of some of the younger members of this flock, and so at the conclusion of the Young Peoples' meeting preceding the regular Sunday evening sermon, he asked this question: "What would you like to have me talk about this evening?" There was no response to his inquiry and finally he pressed a bright young fellow whose best girl was forced by her orthodox parents to regularly attend divine worship, for an answer. The young man had been one of his more or less attentive listeners on former occasions and reluctantly though very philosophically answered, "If you please, sir, talk about two minutes." No doubt the young man would be as greatly benefited in that time as in an hour spent in trying to understand a discourse for theologians.

It is a serious mistake to engage in the study of medicine without a thorough general education, for he who has not previously had a good mental training will be greatly handicapped.

But it is not enough to have physical and mental vigor and ability, for these form but the superstructure upon which to build. If there is one thing more than any other under your control, which is going to contribute most largely to your success in the study and practice of medicine, it is the amount of good hard work each one of you do. Growth and success are synonymous; growth certainly means success, which is a favorable termination of anything attempted. Nothing worth achieving has ever been attained except bv faithful, persistent labor, and in these days of progress and activity, if you hope to find that sparkling gem of medical knowledge, you will have to make up your mind to get down and dig, and keep digging until you have uncovered and extricated it.

Did you ever stop to think what habit is, to what an extent it is responsible for our several conditions, and how largely it contributes to our destinies? Habit is an acquired involuntary tendency to do that which was originally purely voluntary. We are to a very great extent creatures of habit, and it is astonishing to note with what ease and rapidity one becomes habituated to certain actions, and how difficult it is to free ourselves from long-continued and accustomed doings.

Habits of study and observation readily grow and develop into a capacity for research, which should be a striking characteristic of the modern physician.

Repeated application of the will and a determination to learn, soon gives an inclination for work and spurs one on to greater efforts; while persistent and prolonged attempts bring a greater capacity for labor. It behooves you, therefore, to cultivate not such habits as will be eventually detrimental and useless, but on the contrary rather seek those that will be beneficial and profitable. To grow in knowledge one must needs be studious, and I cannot be too emphatic in urging upon you the necessity of cultivating an inclination and capacity for work.

The poet's assurance that "the proper study of mankind is man" is of peculiar significance and applicability to the physician. A recent publication made a famous French writer assert that "There is no use in denying that human life in the aggregate is made up of hypocrisy and hysterics." This is a very sweeping assertion and most of us would very much dislike to seriously consider it literally. It might, however, serve to remind us that conversation has been trained nowadays with so much care that it can almost be guaranteed not to betray the innermost thoughts, and, excepting on rare occasions, most people can say quite fluently the thing they do not really feel. To be present on these "rare occasions" is to learn what initiates, actuates and dominates human endeavors; to be enabled to form true estimates of what life really is, and to be afforded opportunities for the "proper study of mankind."

There is no other calling or vocation in which men are engaged, save possibly that of the priesthood, which brings them face to face with, and to whom certain phases of human life are continuously presented as that of the profession of medicine. Many human ailments may be attributed, if we but knew it, to ignorance and passion, and the medical student will repeatedly be confronted with conditions that are far from agreeable and often very pathetic. You will be required to do many things which ordinarily fill sensitive and fastidious persons with repugnance and horror. One of the first things you who are beginners will be forced to overcome is the natural aversion for handling human remains, but a proper knowledge of the topography and construction of the various internal organs, the location and course of the numerous nerves and blood vessels and the mechanism of muscles, etc., is obtained only by weeks of faithful work upon the cadaver. Visiting patients afflicted with small-pox, diphtheria, or scarlet fever, and hours spent with germ laden surroundings, amidst squalor and the most unsanitary of conditions, is not without personal danger, yet is repeatedly exacted and must be cheerfully and fearlessly done. Examining sputum, analyzing urine and inspecting faeces does not appeal to one's aesthetic taste, but must be learned and often repeated to make proper diagnosis. To handle venereal diseases and encounter them where least expected, has a tendency to shake one's faith in human fidelity and is nearly always provocative of disgust. The use of the bougie, the catheter or the stomach tube cannot be edifying except when viewed from a purely scientific standpoint. These are but some of the duties and exactions of medicine to which one must adapt oneself; and, therefore, it seems to me that in order to conform with these and other similar conditions, an extraordinary adaptibility would not only be a great aid but very essential to desirable progress.

It is not my purpose to draw a gloomy picture for your inspection, but rather to call your attention to some of the stern realities with which you will surely be confronted, and to remind you of the enormity of the task before you. You are here to glean knowledge pertaining to matters medical, by the light of which you may be enabled to assuage suffering, alleviate distress and avert misery.

He is the greatest of men who does most for his kind; and "he that will so demean himself as not to be endeavoring to add to the common stock of knowledge may be deemed a drone in the hive of nature—a useless member of society."

That worldly woman, Madame du Barry, said experience had taught her that "Nothing is so conducive to health as the performance of a good action; and nothing so cools and refreshes the blood as the consciousness of having avoided the commission of some act of folly." To know what folly is, one must have wisdom.

There is no class of men whose opportunities for doing good are greater than the physician's, but whoever studies medicine with the sole object of thereby making an easy living will not only be disappointed, but is unworthy of the name, for an unscrupulous and designing man or woman can readily wreak unspeakable injury in the practice of this profession. With your aims high, your motives pure and your purpose lofty, then, indeed, but only then, is your pursuit laudable, and I congratulate you upon your choice. If you will give to your efforts good hard work, with a liberal mixture of good common sense, I bespeak for you a glorious fruition.

One other thing should merit our attention in the considerable of the acquisition of knowledge. We have seen at the outset that we are depended to a great extent for what we know upon the information given us by others, and, therefore, much depends upon our instructors. To know is not always to be wise, but knowing is the material with which wisdom builds. In the language of Cowpre, "Knowledge dwells in heads replete with thoughts of other men; wisdom, in minds attentive to their own." It is said that the ancient Romans knew how to make a mortar which would outlast the very stones which it joined, but the knowledge being general nobody wrote it down, and so in time, as the Romans shifted their building upon slaves and foreigners, the recipe of this cement was lost. So far it has not been discovered, though the secret of it would be immensely valuable, and thus very important knowledge has been forgotten and lost. Comparatively few learned men possess the faculty and inclination to impart their knowledge to others in a manner that will permit of its being grasped easily and readily.

To be able to learn with expedience requires a good teacher and a competent tutor should not only possess a thorough knowledge of his subject, but he must be able to present it in every detail in an interesting manner and with sufficient emphasis and impressiveness to insure its reception and retention. It is no easy task to always express oneself so as to be correctly understood, while to be entertained is not always to be instructed. The field is so very wide and some of the topics, especially in the first year, may at times seem rather dry, while the student is unable to determine what is theoretical and what is of practical importance, so that if his work is not carefully directed and his labors judiciously systematized, a great deal of time and energy will be unnecessarily expended. It should be the aim of the instructor to emphasize only that which will in the future be of practical value.

To be able to make a correct diagnosis is the most important and very frequently the most difficult task of the physician. This ability requires a skill and knowledge that cannot be obtained from books and lectures alone, and hence a large proportion of the instruction must of necessity be clinical. It is not the number of cases presented, but the manner of their presentation that is most desirable. He who shows one typical case with a demonstration that is forceful and thorough in every detail, is a far more efficient teacher than the one who exhibits a score with a few witty remarks and casual glances. Major surgical operations in a crowded amphitheater with a famous and brilliant operator may be interesting and instructive as far as technique goes, but you cannot acquire surgical dexterity and diagnostic ability by merely witnessing an unlimited number, and besides your chances for working under like conditions are in all probability not one out of a thousand. It requires something more than four years in college to make a great surgeon nowadays, and the more time and attention you give to ordinary and minor cases the better will you be fitted for routine work.

The scope of medicine has become so extensive that a tendency to drift into specialism has been created. It is not the intention or purpose of this institution to turn out qualified specialists in any particular branch, but having myself first been graduated from this school, and having subsequently spent a couple of years in the world's great centers for medical learning, I have no hesitation in saying that the knowledge you seek can be obtained quite as well here as anywhere (and much better than in some of the larger colleges) provided only that you will apply yourselves.

After all people are very much alike the world over, and though you will probably not have an opportunity to see cases of yellow fever, Asiatic cholera or bubonic plague here; yet if you are going to practice medicine in this section of the globe you will not have occasion to encounter such, and you can read about them just as well here as in New York, New Orleans, London, Vienna, or Calcutta, if you b will it so.

This faculty, I am sure, is not unmindful of the confidence reposed a will zealously endeavor to faithfully discharge its obligations. Let us all, then, remember that "He who helps a brother, sows seeds of golden grain." (This sentiment will not apply, however, during your examinations.)

To those students who for the first time are present here, as well as to those who have hertofore attended, let me say in conclusion that you owe to the institution a decorous demeanor, obedience to its rules and compliance with its regulations; to your classmates and fellow students you should exhibit courteous conduct, fraternal feeling and co-operative willingness; to your teachers you owe prompt attendance, respectful attention, befitting esteem and proper appreciation.

With such a disposition on your part, you may safely rest with the assurance that the corps of instructors in this faculty will gladly render you their earnest efforts, co-operative labor, cheerful assistance and kindly guidance.

Treatment of Pulmonary Tuberculosis.

It may be said at the outset that the author does not pretend that this article is complete, but only emphasizes some points in the individual prophylous and treatment that has interested him and may be of interest to others.

We all recognize the utility and benefits of proper climatic treatment carried out under efficient medical supervision; of this large subject I have not made any attempt to treat.

Considering the number of infected individuals tuberculosis of the lungs is not a very fatal disease. It is well known that tuberculosis heals spontaneously in many cases, as evidenced at autopsies by finding scars.

If tuberculosis of the lungs were recognized at an early stage many more cases could be relieved.

In the white race, at least, there probably exists a natural or acquired immunity or resistance against tuberculosis. In the more primitive races tuberculosis is much more fatal and the infected negro is said never to recover. The disease develops there because of a lessening or loss of this immunity, or resistance, or because of repeated infection with potent bacilli or both.

In treatment then we attempt to—

1. Build up this natural resistance.
2. Produce local conditions unfavorable to the growth of the bacilli.
3. Mitigate the effect of the toxins or neutralize them.

Prophylaxis.—It is taken for granted that the physician treating a case of pulmonary tuberculosis properly instructs his charge in regard to the disposal of his expectorate. This is very proper and lessens the danger, but do we examine with due care and fully instruct persons we are called to treat for acute illness.

We should always have in mind the fact that childhood and especially adolescence is a very vulnerable period and the infection frequently becomes fixed at this period of growth. Proper hygiene and diet at this time is often sufficient to carry the individual through to robust adult life.

The utility of prevention is shown in an article by Dr. T. C. Myller, whose own children all had the "phthisical fabitus." The two eldest died, no measures having been taken to overcome the tubercular tendency. The other children were strengthened by proper diet, hygiene, gymnastics and all were saved.

We should always be on our guard and watch convalescents from serious disease, especially of the respiratory organs. There is a tendency at this stage of the disease for the patient and physician to part company, but I believe it would be greatly to the advantage of the patient to be kept under observation for an extended period. During this stage of weakness there is danger of the lighting up of an old tubercular focus or by fresh infection.

In the acute respiratory diseases, we should be ultra cautious, for these troubles are very frequently superimposed upon a tubercular infection. In cases free from taint the lung tissue is often slow in healing, thus leaving an entrance for the infection.

Our attention should not be taken up with the condition in the lung as to cause us to neglect to examine carefully the upper air passages, for disease in the throat is a frequent source of infection.

Abundance of fresh air and sunshine, with or without exercise, according to the care.

Man is so constituted that he can survive for a time, in an atmosphere in which the oxygen is greatly reduced.

It is said that the men in a primitive submarine boat, during the Civil War, lived an hour or more, in an atmosphere in which a candle would not burn, and suffered no permanent ill effect. If, as in this case, the oxygen is largely cut off at once we feel the ill effect and correct it; but light deprivation of oxygen extending over a long period, is not noted, and yet the effect may be far more serious. This slow poisoning, or rather this effect of living in a vitiated atmosphere, is known as vitiated air toxaemia. This sort of poisoning seems to have some relation to the development of tuberculosis in many cases.

It has taken the profession a long time to appreciate the importance of the out-door treatment in tuberculosis of the lungs.

Dr. Bodington, of England, practiced the outdoor treatment, as early as 1834, and is claimed to be the pioneer in this method of treating this disease.

At the present time we as a profession accept this treatment but apparently are not able to transmit this belief to all of our patients.

Fresh air and sunshine are suitable to all cases of tuberculosis of the lungs regardless of the stage. The fresh air must be furnished continuously day and night.

Those in the incipient stage who are not much debilitated and have a temperature below 100½ may take exercise or work in the open air; but these should, if possible, avoid fatigue. Persons with tuberculosis who are obliged to work in vitiated atmosphere should be ordered to change their occupations, if possible, to some out of door work.

It is useless and harmful for the greatly debilitated and cases with fever to indulge in exercise. The weakness is judged by tachycardia; and a temperature of 100½ F. or over, is an indication for repose. Exercise should not be taken near the main meals of the day, as it is apt to interfere, more or less with digestion.

A continuous supply of uncontaminated air is a necessary factor in the treatment of pulmonary tuberculosis.

In order to induce some of these cases to overcome their fear of fresh air, especially at night, requires a re-education of the individual. This idea of having fresh air day and night, seems to be something of a novelty to many individuals, otherwise quite intelligent, and the physician will be obliged, and we should not be afraid, to repeat over and over again the same thing till it is fixed in mind, and comprehended.

In the Massachusetts general hospital the bedridden tuberculars are placed in an unvitiated atmosphere by means of the following method:

The bedsteads are made with the legs at the head set back about 1½ feet, and they are of such height and width that they can be pushed out through the window a short distance. With the patient on the bed it is pushed out through the open window. A blanket is fastened to the sash and casing and brought down over the patient's shoulders. Thus the patient's head is out of doors and the body inside. The head can, of course, be protected according to the weather. The effect of this modified outdoor treatment is highly successful in improving the patient's condition. It is readily seen that some modification of this plan can be adopted in the home.

In applying this fresh air treatment, it should be remembered that cold is extremely depressing to those who are debilitated, and in prescribing it for those tuberculars who are emaciated and weak, they must be effectively protected against the cold.

There is hardly any doubt but that the effectiveness of certain climates is due in large part to the high percentage of sunshine. In climates such as ours, pleasant and clear days should be utilized by pulmonary cases to the greatest possible extent. It is being prescribed now not only for tuberculosis of the lungs, but also for diseases of other organs.

De Forest Willard, Journal of The

American Medical Association, Vol. XLI, page 154.—This author says in part: "The most powerful agents in our possession for the inhibition and destruction of these micro-organisms (tubercle bacilli) are sunlight, fresh air and abundant nourishment."

In addition to the time spent in the open air and sunshine, the patient may be instructed to take a sun bath as advised by Dr. James Anders. This can be carried out in winter as well as in summer, if there is a window with a southern exposure and no obstruction. The thorax is simply bared and the chest exposed to the direct rays of the sun for from fifteen minutes to two hours. The chest should be exposed both in front, posterially and laterally. By exposing the chest in this manner, more of the interior is illuminated. It is, however, best to give the greater part of the time to the illumination of the anterior thorax. It seems possible that the absence of illumination within the thorax of the negro, may account, in part at least, for their alleged failure to recover after once being infected.

The daily bath should be insisted upon. No patient is so poor but that he can, at least, take a daily sponge bath. The benefits of the bath are incalculable. It increases the activity of the skin, so necessary in any disease of the lungs, and it removes toxins, and other products that accumulate there.

Diet.—Increased feeding should go hand in hand with attention to assimilation and excretion. It is useless and actually harmful to stuff the patient with food that the stomach and intestines cannot take care of and remove, and is a source of danger from the possible soluble poisons from the undigested proteids. If there is stasis in the stomach, a glass of hot water one full hour before the meal, will place the stomach in a better condition for digestion. Lack of appetite is overcome by the use of the simple bitters, combination of nux vomica and tincture of gentian in the proper doses. A good extract of malt with hops may be used for the same purpose.

The main meals of the day should be made up largely of proteids with a considerable quantity of fats. Beefsteak, roast beef, lamb, chicken, fish, raw eggs, milk, fats, carbohydrates, bread, vegetables (sparingly), sugars, if they agree, but only with the meal. The diet, of course, must be modified to suit the condition of the individual patient.

Tubercular patients generally refuse fats.

In a book on consumption, written by Edward Smith, M. D., L. L. B., F. R. S., published in 1865, the author gives the result of his investigation in regard to the dislike of certain foods prior to the development of or early in the disease. A distaste for fat existed in 53.5 per cent of patients in the very early stage of the disease.

This author also pleads for the feeding of tubercular patients through the night as well as day, which seems a very good suggestion and one at the present time so generally followed.

The proteids, especially if taken in the raw or partially cooked state, seem to have an effect beyond a mere food. It is possible that these albumins combine with the toxins to form less harmful products. It may not be amiss to suggest that meat contains a goodly percentage of easily assimilated iron.

It is often useful to consult the patient's food preferences, but in many of these cases the choice is so entirely in the wrong direction that there is no chance to gratify them.

In using this increased proteid diet, stasis in the stomach and bowels should be guarded against by proper amount; some individuals can take much larger quantities than others. Constipation is to be corrected by the proper remedies. There is an excess which should be removed before it breaks down into harmful products. High colonic flushings given once daily tend to greatly lessen this danger.

As far as it is possible we should relieve the patient from mental and physical stress. The latter is usually more easily regulated than the former, unless the patient can be sent away from home.

Medical supervision should follow

these cases long after they think themselves cured. This can only be accomplished by gaining the patient's complete confidence and leading him to see the case as you see it. He must be made to understand that his change of habits and manner of living is not a temporary measure to assist in the cure of his disease, but a permanent change if he would remain well.

No physician now expects to relieve tubercular disease of the lungs by drugs alone. The tonics and restoratives should be applied according to the individual's needs.

Creosotal (creosote carbonate) seems to have a beneficial effect and should not be given in massive doses. It is most useful in those cases that are little advanced. It is best given in cream.

In cases of marked sepsis, due to mixed infection, ichthyal is of great benefit.

Dr. Burnet's experience with this drug is an average experience (Lancet, London, Aug. 8, 1903). He finds that it lessens cough, improves nutrition, decreases gastric distress, and is absolutely free from initiating properties as far as the stomach is concerned. It is best given in capsules, but can be given in solution.

Start with 4 or 5 M. one hour after meals and increase 5 M. each week up to 20 or 30, until infection is controlled.

If the invasion be largely streptococcic, the anti-streptococcic serum may be of benefit.

Dr. Norman Bridge lauds the usefulness of strapping the affected side, thus simply increasing the natural tendency toward a very limited movement. It encourages healing, controls cough in some cases, and gives radical relief in cases with pleurisy pains.

The lung initiation coughs are best relieved by Codiene or Heroin. Their fun chair should be remembered and they should not be abused.

The serum treatment and the laws governing immunity against tuberculosis have not been completely marked out, but much light has been thrown on this subject, both in this country and Europe. Dr. E. A. DeSchweinitz, as early as 1894, immunized calves and cows against bonnie I. B. by injecting cultures of live human tubercle bacilli into the jugular veins.

The so-called "Marbury experiments" were conducted along somewhat the same lines, but were more complete and conclusive.

In these experiments Behring has succeeded in demonstrating that by injecting cattle, mostly calves, with small quantities of cultures of living tubercle bacilli derived from human tubercular lesions, and increased, there is produced in the animals so injected, complete immunity to bovine tubercular infection, so far as can be found out by experiment. Cattle so immunized have been kept in close contact for more than a year with animals in the last stages of the disease, and did not contract the disease.

Behring calls this "Jennerization," and claims that live cultures only are effective. He suggests the use of milk from immunized cows to protect infants against intestinal tuberculosis.

Maraghano uses the toxic product from tubercle bacilli to produce a local tubercular lesion, which healing leaves the individual immune. This is based on his claim that when a tubucular focus anywhere in the body completely heals the individual is thereafter usually immune from tuberculosis.

If this latter is true it should encourage us to persist in the treatment of our cases long after apparent cure, and to make some of the healing by tuberculin.

Maraghano produces a serum by injecting increasing doses of the tubercular toxis product into asses, thus attempting to produce an anti-toxin.

Maraghano claims to cure tuberculosis with his serum, and one case has been well now for seven years. He does not claim it has any effect on the sepsis.

Drs. Cioffi and Piera have used the serum extensively and claim to have cured a large per centage of the incipient cases.

The serums in this country are produced by injecting horses with increasing doses of the toxic tubercular product.

The serum thus produced seems to

be similar in action to Maraghano's.

Conclusion: — Whatever treatment finally prevails:

1. Supervision of the growing period of the individual will always be important as a means of prevention.
2. Fresh air and sunshine will always have an important place in treatment.
3. Attention to the diet along the lines indicated will always be useful in aiding the cures.
4. Enough evidence has accumulated to warrant us in taking up the serum treatment as a distinct aid in the cure of the incipient cases.

Some Improvements in the Method of Local Analgesia.

A clinical lecture with the above title, delivered at University College Hospital, London, July 11, 1903, by Arthur E. J. Barker, F. R. C. S., Eng., appears in The Lancet, for July 25, 1903.

Several points must be borne in mind, among them the mechanical and physical difficulties in infiltrating all the nerves supplying an extensive field of operation. To inject the whole area so as to reach all its nerves would mean in many cases the use of much more of the toxic drug than is necessary, and in some cases so much as to be dangerous.

The author refers to certain observations by Braun of Leipsic, on a method of overcoming the drawbacks incident to the usual mode of producing local anesthesia. This method is based upon the old experience that anything which retards or diminishes the circulation of the blood in a part enhances the potency of the anlagesic agent. Experiments were made with Adrenalin, a very small quantity of which was injected with B-eucaine (or cocaine) into the author's own arm, and subsequently into the arms of numerous patients. After the lapse of twenty minutes the part was quite blanched and wholly insensitive to pain, remaining so for about two hours. Adrenalin, alone, used in this way had no analgesic effect, while the results of the use of the combined solutions of B-eucaine and Adrenalin were far superior to those produced by B-eucaine alone.

The most convenient way to prepare the solution is as follows: Powders each containing 0.2 gramme (3 grains) of B-eucaine and 0.8 gramme (12 grains) of pure sodium chloride are kept in thick glazed paper, ready for use. When needed one powder is dissolved in 100 Cc. (3½ fluid ounces) of boiling distilled water, and 1 Cc. of Parke, Davis & Co.'s Solution Adrenalin Chloride is added when the fluid is cool. The solution is left in the Jena glass beaker in which it has been boiled, which is carefully covered and placed in a vessel of warm water to keep it at blood heat.

The injection is made by means of a simple syringe of glass and metal of 10 Cc. capacity, with rubber washers, which can be sterilized by boiling.

To illustrate his method the author describes in detail the performance of an operation for the radical cure of inguinal hernia. The hernia is first reduced and the index finger is thrust into the external ring as far as possible. Along this finger the needle is entered and the inguinal canal is filled with 10 Cc. of the solution. An endeavor is made to inject it all around the neck of the sac so as to reach the genital branch of the genito-crural nerve. The needle is then entered at the external end of the line of incision in the skin, and is made to infiltrate the superficial layers of the latter down to the root of the scrotum, making the resulting wheal at least an inch longer at each end than the incision is to be. Injections are then made at a point half an inch to the inner side of the anterior superior spine of the ilium, the needle being thrust towards the ilio-inguinal nerve, and at a point about one inch above the middle of Poupart's ligament where the ilio-hypogastric nerve is most conveniently met. Then the thigh is flexed and another syringeful is injected along the ramus of the pubis and the root of the scrotum or labium.

It is necessary to wait twenty minutes after the last injection for the full effect of the Adrenalin to develop. The whole field of operation should be blanched and insensitive to pricks but not to touch—analgesia, not anesthesia. The incision may then be made with confidence that no pain will be felt. The absence of oozing of blood is noticed. Only large vessels bleed at all.

Success depends upon a mastery of the principles, and practice in the details of the method. It is not enough to inject the fluid under the skin generally. Due regard must be had to the position and course of the nerves supplying the structures to be dealt with. The Adrenalin compound, by slowing the circulation through the part prevents the anesthetic agent from being rapidly washed away. The writer has used this method in thirty operations, including the radical cure of hernia, strangulated hernia, orchidectomy, removal of varicose veins, psoas abscess, loose body in knee, tumor of neck (actinomycosis), colotomy, Thiersch skin grafting, and cystic adenoma of the thyreoid.

Hysterectomy for Cancer of the Uterus.

By Ernest W. Cushing, M. D., Professor of Abdominal Surgery and Gynecology, Tufts University, Boston, Mass., and read at meeting of Maritime Medical Association, St. John, July 23, 1903:

Like most other surgical procedures, this operation has undergone a decided evolution and improvement within the last few years, along the lines of increased thoroughness. The lesson was learned, in the development of the operation for mammary cancer, that the glands and fat of the axilla must be entirely removed. Moreover it was found that the raw surfaces of the wound must be protected from inoculation with the cancerous infection, and for this reason great care is taken not to cut into the diseased mass, nor even to sever the lymphatics which run from the breast to the axilla, but to remove them and the whole of the diseased or suspected tissues in continuity.

These lessons are evidently applicable to the operation for removal of the cancerous uterus. Although this organ is completely isolated for a large part of its surface, and can be easily removed in toto, with little immediate mortality, yet the final results were disappointing.

Long series of cases were published, showing that nearly all the patients finally died of cancer, recurrent, or rather persistent, and extending in parts which were already affected at the time of operation, although such involvement in disease had escaped observation. This is precisely the condition of things which obtained in the regard to mammary cancer before the operation was perfected as mentioned above. The lessons from analogy have been needed, and our procedures have been improved accordingly.

Of the two ways by which the uterus can be removed, through the vagina or through the abdominal wall, each has certain decided advantages, so that it is not always easy to determine which method it is better to adopt.

The first procedure to be elaborated and to be described with precision was Freund's total abdominal extirpation of the cancerous uterus (1878), but the immediate mortality of this operation was so great that it did not commend itself to surgeons, and not even the technik of tying off the broad ligaments was adopted for hysterectomy for myoma until some twelve years afterwards.

Czerny, in 1879, revived vaginal hysterectomy and was followed by Billroth and A. Martin in 1880. A large number of operations were performed, and the mortality was compartively so law that vaginal hysterectomy gained great favor, and by 1885 it had become the accepted operation for cancer of the uterus, under the enthusiastic advocacy of A. Martin, who visited this country in 1887 and performed the operation here several times. In 1888 the writer published 21 consecutive cases, with two deaths, using clamps. Other surgeons also published series of cases, with very good results, soon after.

Nevertheless, there were drawbacks. Some cases were complicated by adhesions of the appendages, not readily distinguishable from infiltration of the broad ligaments. In some the vagina was narrow, or the tuberosities of the ischia too near together. In some the body of the uterus was large and friable and foul. In some cases the condition of the patient seemed worse than the state of the uterus would account for, and it was very important to know whether there was a spread of the disease internally. The clamps which were largely in use were painful, and there was much discharge from the vagina after operation, so that hospitals became infected from this and from the discharges from the stumps of abdominal hysterectomies, which then were performed with extraperitoneal ligature and fixation of the cervix. There was great longing for a proper and satisfactory means of removing the whole uterus from above.

Then came 1890 and the Trendelenburg position, which changed everything. By 1892-3, total abdominal hysterectomy for fibroids was firmly established at the great meetings of the American Gynelogical Society in those years. Thus the possibility was given of safely removing the cancerous uterus from above, substantially after the method of Freund. This procedure had failed in the beginning for want of the elevated position of the pelvis, for want of thorough asepsis, and for want of all the little improvements in preparation, technik and after-treatment, which meanwhile had been reducing the mortality of ordinary supravaginal hysterectomy for myoma from 60 to 5 per cent.

In the reaction which ensued from vaginal in favor of abdominal hysterectomy many surgeons abandoned the former entirely, and removed the uterus, and as much of the vagina as might be necessary, always from above. But there were still disadvantages connected with this method. The cancerous cervix was septic; and it was necessary to cleanse, curette and cauterize it before it was safe to lift it out through the abdominal wound. Many cases died, and in fact more than by vaginal hysterectomy. This led to further developments of the preliminary vaginal work, so that it grew into a removal of the diseased cervix and separation of the upper part of the vagina, with closure of the vaginal flaps over the stump of the cervix, before opening the abdominal cavity from above.

When all this vaginal work was done, however, it was hardly worth while to make an abdominal incision, except in a few cases, for ordinarily it was possible to pull down the uterus and tie off the broad ligaments and make a finished vaginal hysterectomy without clamps.

In 1895 the writer went to Paris to study improvements in vaginal hysterectomy made by the French surgeons, and for the next two years he critically compared the vaginal with the abdominal methods in a great variety of affections of the uterus, with the result that he became convinced that the vaginal procedure, although valuable in a certain limited number of cases, is much inferior as a method of election to abdominal hysterectomy. In cancer of the uterus he was led to begin the operation by opening the abdomen in certain cases in which it was doubtful whether the conditions would warrant a hysterectomy, owing to resistance in the broad ligament, or other symptoms, which might indicate that the disease had extended into the pelvic tissues.

Adopted first in difficult and doubtful cases, this soon became his regular procedure, first examining the pelvis from the inside and then, if the disease had not proceeded too far, going on to tie off the broad ligaments and sever all the connections of the uterus in the pelvis, finishing with a very simple division of the vagina above the limit of disease and extraction of the uterus and closure of the wound in the vaginal roof.

The superiority of this method in difficult cases will be easily appreciated by anyone who has witnessed or performed a vaginal hysterectomy where there were complications or difficulties. Moreover it combines the advantages of opportunity to reject cases unsuitable for operation, and avoidance of septic infection of the abdominal cavity and cancerous innoculation of the wound surfaces, with the possibility of removing the glands which may be already harboring the advanced guard of the cancer.

Werder, of Pittsburgh, has lately published a detailed account of a modification of this method. He carries the dissection down all around the vagina so far that he can push the whole uterus and appendages down into a position of prolapse. Then he unites the peritoneum above it joining the cut edges so as to close the abdominal cavity completely below. The abdominal incision is next closed, and finally the prolapsed uterus is easily removed by severing the inverted vagina with the thermocautery.

In further attempts to improve the remote results of the operative treatment of cancer of the uterus, in the year 1895, Ries devised and Rumpf performed the removal of the tissues at the base of the broad ligament and the glands at the bifurcation of the iliac arteries, thus shutting off one great cause of relapse, and following out the analogy of the axilla. At about the same time Clark, of Johns Hopkins, was working along the same lines, and in the next year he published his work in the bulletin of that university, and thus contributed largely to the use of the new methods in this country.

Unfortunately, however, these methods are still too little used. Too many cases are operated on too late. In too many diseased glands are left, and far too often the cut surfaces of the vagina and broad ligament are rubbed full of cancer juice, so that the permanent results of the operation are not what they should be, and eventually will become.

On the other hand vaginal hysterectomy has incontestable advantages in certain cases. It can be performed very rapidly, especially by the use of clamps, involving, of course, less shock, the whole duration of the operation being 5 to 15 minutes.

It is easiest of performance in very fat elderly women, with capacious vaginae; just the cases in which the perfected abdominal operation is inconvenient or unadvisable. Although not the method of election it is therefore indicated in cases

(a) Where the strength of the patient will not permit a thorough abdominal operation.

(b) When the patient is very fat and the disease is quite recent.

(c) Provided, in either of these cases the uterus is quite movable, and there is plenty of room in the vagina and between the tuberosities of the ischia, and it is possible to remove all the diseased tissue in the vagina before opening up wound surfaces.

Within these rather restricted limits there is still a field for vaginal hysterectomy for cancer, but as a rule we should look to permanent results, which are best attained by painstaking and thorough operation through the abdominal incision.

Where such procedure is contraindicated or impossible, it is best not to attempt the terrible and difficult vaginal operation in advanced cases, but to fall back on palliative methods such as thorough curettement and careful cauterization, or the use of zinc chloride, etc. The patients will live as long or longer, and surgery will benefit in the end, because every such case will be a warning to the patients to apply for operation earlier in the course of the disease, while every radical operation followed by death or quick relapse only discourages patients from submitting to hysterectomy even in suitable cases.

Whether it is best to perform any operation on the diseased cervix, as a preliminary to opening the abdomen, must depend on the nature of the case. The main point to keep in mind is that any incised or raw surface which is made will be likely to become inoculated with the cancer. Therefore the only reason for interfering with the cervix before opening the abdomen is the fact that there is a growth in, or springing from, the cervix, so large as to interfere with the abdominal work. If this is the case the diseased tissue should be rapidly scraped away, the hemorrhage checked with the cautery and the parts cleansed and tamponed with a strip of gauze soaked in peroxide of hydrogen. If the patient is weak this may be done several days before the main operation, and it is wonderful to see the improvement in strength and nutrition which will ensue after the removal of the foul mass.

On the other hand, one must not wait too long with the hysterectomy, for the patient feeling relieved is likely to refuse further operation, and all the while the infection of the lymphatics is steadily progressing, all the more rapidly from opening the lymphatics in curettement. Just before the hysterectomy, however, the vagina is well washed out with an antiseptic, so that if it is opened inadvertently from above there will be as little risk as possible of infection.

As soon as the abdomen is opened, the patient being in the full Trendelenburg position, the first thing in order is to make a careful examination of the abdominal viscera and the tissues in the pelvis, in order to find whether the conditions are such as to warrant the complete operation after looking at the mesentery and omentum to see whether there are any little cancerous nodules, the broad ligaments are carefully palpated, and if they are infiltrated one must decide whether there is a possibility of removing all the diseased tissue. If the infiltration extends clear to the pelvic wall, forming an immovable mass, further operation is contraindicated.

The region of the bladder and the course of the ureters is likewise carefully examined. If by the skill of the operator, or his assistants, it is possible to have catheters put in the ureters, before opening the abdomen, this part of the examination, as well as the most difficult part of the operation will be greatly facilitated. Nevertheless, with care and discrimination and good anatomical knowledge it is possible to dispense with catheterization of the ureters, and thus the time of anesthesia is shortened. The ideal procedure is to slip catheters into the ureters, under cocaine, before the ether is given.

The next point to examine with attention is the bifurcation of the iliac arteries, on each side, for here lie the glands which are first invaded in cancer of the cervix. If these glands are simply enlarged the operation is warranted, but if they form an immovable packet, involving the iliac veins, it is necessary to abandon the operation. Surgically it is possible to tie the common iliac vessels, but it is not justifiable in such cases. The patient will probably die, and if by chance she live it is morally certain that the disease will recur, for the infection will already have passed so far that the diseased tissues cannot all be removed.

By a careful examination of this kind it will be found unadvisable to perform any radical operation in many cases, in which the uterus might be removed with more or less difficulty per vaginam. The patients will thus be spared unnecessary shock, and the surgeon will avoid dangerous and useless interventions, with unfortunate and distressing sequelae. On the other hand some cases which seem most unpromising by vaginal examination, where, for instance, the broad ligaments feel hard, and there are immovable masses in the pelvis, are found on examination through an abdominal incision to be perfectly feasible for hysterectomy, since they are simply cases of cancer of the cervix complicated with pelvic inflammation, adherent tubes, etc.

In removing the uterus the ovarian artery and the artery of the round ligament should be carefully tied, without gathering together the tissues between them, as is often done in hysterectomy for myoma. It is desirable to open widely the space at the side of the uterus in order to facilitate the subsequent steps of the operation.

After careful and very thorough separation of the bladder in front, and of the connective tissue at the sides, the uterine artery is secured as far from the uterus as possible. It is just here that the skill and anatomical knowledge of the operator is most needed.

The ureter runs just under the uterina, crossing it obliquely, and must on no account be injured. The lateral vaginal arteries come off from the uterine, and the ligature should be placed on the proximal side of their origin, close to the internal iliac, in order that the further steps of the operation may be comparatively bloodless, and to facilitate the clearing out of the gland-containing fat around and below the ureter.

Pryor recommends that ligatures be placed on the main trunks of the internal iliac arteries, thus rendering the whole field of operation bloodless. To make sure against recurrent hemorrhage from anastomosis, he ties the uterine, obturator and superior vesical arteries also. It seems to be proved by his experience that both internal iliacs may be ligatured in continuity without causing any tissues to slough. Nevertheless it can hardly be said that surgical opinion, as yet, favors the litigation of the internal iliacs, although if experience shows that shock is not unduly increased and that collateral circulation is always established there are many advantages in this brilliant procedure. The origin of the internal iliacs must be exposed in the perfected operation in order to remove the glands which lie about it, and it is really easier to tie this artery than to trace the uterina back to its source and to tie it there, deep in the pelvis and close to the ureter.

The uterus being removed, the bladder gets sufficient nourishment from anastomosis with branches of the superior hemorrhoidal artery, while the gluteal and perineal region is supplied with blood from anastomosis with branches of the deep epigastric and of the circumflexa femoris and other branches of the femoral artery.

I have never found it necessary to tie to the trunk of the internal iliac, although I have sometimes tied the anterior branch, thus suppressing the circulation in the uterine and vesical and vaginal arteries, but not interfering with the gluteal, ilio-lumbar and lateral sacral arteries.

The uterine arteriese having been tied and severed, the uterus can be lifted up, carefully sundering the utero-sacral ligaments and the rest of the peritoneal attachments of the uterus. Traction on the uterus lifts the floor of the pelvis, and the ureter is next carefully dissected out and pushed forward. Next, the thickened tissues around the cervix and vagina are gently enucleated with the finger, and all fatty tissue, which is presumably gland-bearing, is dissected away from the floor of the pelvis. This procedure is carried on until the uterus is only connected with the body by the vaginal tube, which in turn is to be separated from its surroundings as far as may be deemed necessary.

In very simple and clean cases the upper part of the vagina, including all the cancerous tissue, may be shut off with two clamps on each side, and vagina divided between the clamps. The stump is now carefully cleaned and pared and united with catgut, and the peritoneum closed over it. If the stump of the vagina is so short that this would leave too much space between the vagina and the peritoneum, the former may be drained with gauze, instead of being sewed together.

If the disease is at all advanced it is better not to open the vagina, but to push the uterus down and afterwards to remove it from below. If the dissection has been carried as far as Werder recommends it is possible to close the peritoneum over the uterus, but this involves a deep and difficult dissection, with considerable danger of cutting into the vagina, and thus risking infection. It also leaves the woman substantially with no vagina, which is often a matter of importance.

I am accustomed to free the uterus and the upper parts of the vagina and then to sew a pad to the fundus uteri and pushing the uterus down as far as possible to pack the pad into the bottom of the pelvis; this checks oozing and keeps the intestines out of the way when the uterus is finally removed.

Formerly this dissection was deemed sufficient and the abdomen was closed, but the analogy with the axilla requires us to remove all the glands, in order to extirpate the furthest lurking places of the disease.

(Concluded in Nov. Issue.)

Second perb.

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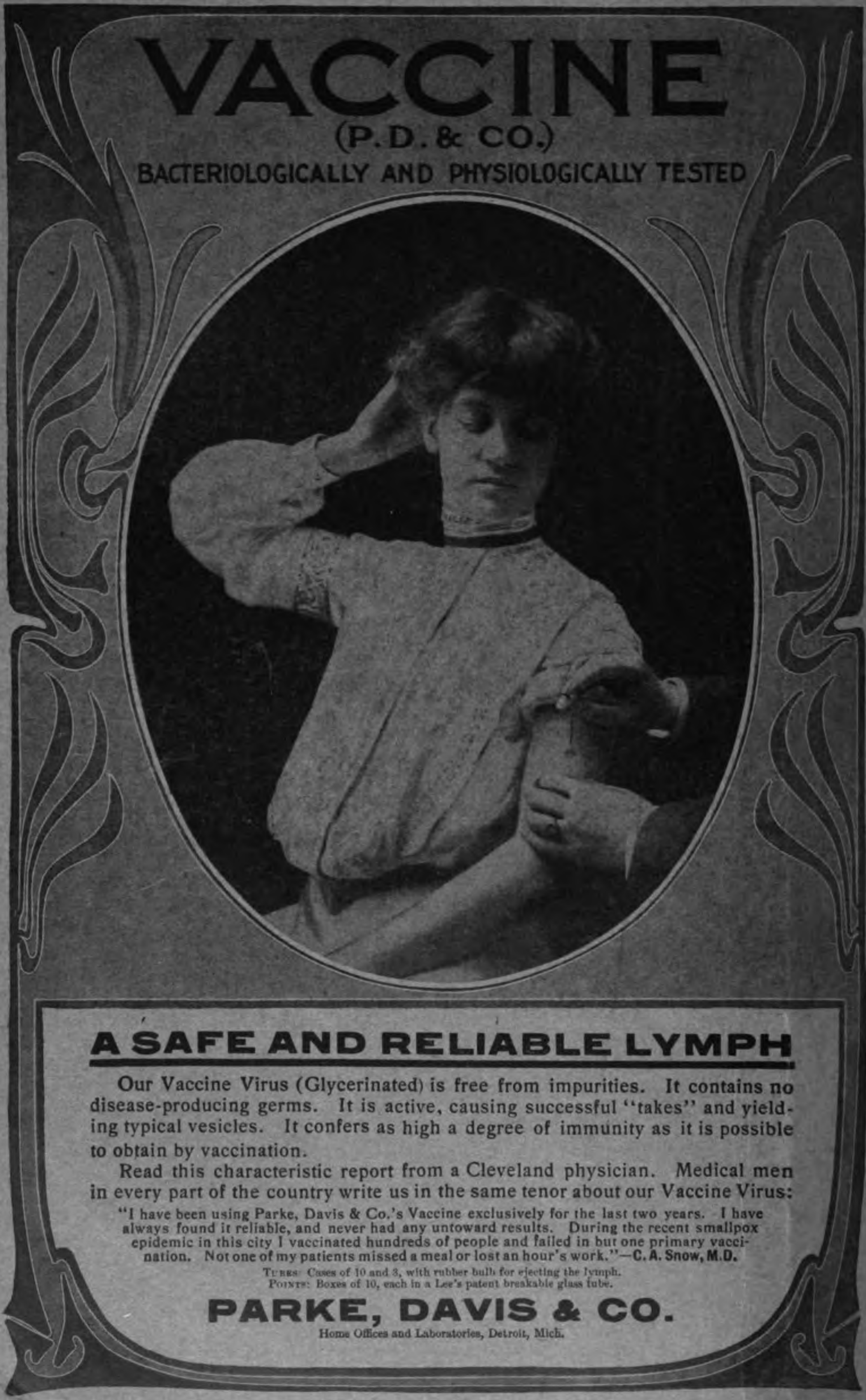

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Correction.

The original article on "The Treatment of Pulmonary Tuberculosis" in the September issue was prepared by Prof. Chas. H. Bradley, of the Medical Department of Hamline University, and the author's name was accidentally omitted by the printer.

A New Presentation of the Tuberculosis Problem.

Under the above title the Medical Record of New York, Oct. 10, 1903, has an editorial concerning the address of Prof. V. Behring before the annual congress of German Naturalists and Physicians, held recently at Cassel. The address was remarkable and rather startling in the views expressed in regard to the universality of tuberculosis, and also in the direct challenge of Koch's theory of the non-identity of bovine and human tuberculosis, and in the promises of the prophylactic serum. The address was published in the Deutsche Medicinische Wochenschrift, of Sept. 24, 1903, and the author quotes the remark of some one, "That we are all a bit tuberculous," and furnishes statistics to prove the saying is the expression of an actual fact. It is said the tuberculin test proves that from 90 to 95 per cent of the community is infected. Prof. Behring believes this statement is true, and asks of what advantage is isolation in preventing infection? It will surely be impossible to isolate so large a proportion of the community or keep them in sanitoria to stamp out the disease. Prof. Behring does not believe in the contagiousness of consumption, as generally understood, and thinks the disease is seldom acquired by adults, the development in such cases being a "lighting up of a slumbering focus of infection which the individual has had from infancy," the outbreak coming from exciting causes, exposure, ill health, and a depression of the vitality. Prof. Behring excludes the theory of heredity, and thinks the main, though not the only, source of infection in human beings is the milk, either from the tuberculous mother or that from a tuberculous cow. He considers infants much more liable to be infected through the digestive organs than adults, "the pores of the intestinal canal being large and admit readily various microorganisms, tubercle bacilli among the rest, that are excluded by adults." But infants may be infected otherwise than by milk, the specific bacilli reaching the intestinal tract in other media.

The evidence of heredity in this disease is too strong to be dismissed with the bare statement of disbelief by one or even many individuals. When statistics show whole families destroyed, most of them arriving at the same age, and perhaps widely separated in locations, the conclusion that heredity is a prominent cause appears to be well founded.

Prof. Behring speaks of his work in regard to the preparation of an effective prophylactic; his method has been employed so far only with animals, and he is not yet ready to test it with human infants, while it might save many, it might destroy some one and bring the serum into grave disrepute. The investigations will be continued along these lines, and it is hoped that something may be discovered that will prove safe and satisfactory. There is now such intense interest manifested by investigators of this disease that we may expect a remedy to be found in time if one exists.

To Examine the River Waters of Minnesota.

Under an agreement made last July by the United States Geological Survey, the State Board of Health and the University are engaged upon the survey and examination of the natural waters of Minnesota.

The waters of northern Minnesota are being examined by an engineering aid of the geological department of the government, and especial consideration is being given to the condition of the normal waters at Cloquet, Cass Lake, Bemidji, Crookston, Ada, Beltrami, St. Hilaire, Hibbing, Virginia, Biwabik, Ely, Tower and Eveleth.

The chemists of the University are conducting a series of chemical examinations each month of waters from the following locations: Mississippi river, above the confluence of Rum river and below polluting influence of Anoka; on Rum river, at a point near its confluence with the Mississippi, and above the polluting influence of Anoka; on the Mississippi river, above Minneapolis and below St. Paul; on the Minnesota river, at Fort Snelling.

Chemical and biological examinations are being made by the State Board of Health of waters from Kettle river, at Sandstone, St. Croix river, at Taylor's Falls, above and below Stillwater and at Point Douglas; Crow river, at Pillager; Mississippi river, above and below Brainerd; above Sauk Rapids, below St. Cloud, and above Wabasha; Zumbro river, at Rochester; Minnesota river, above and below Montevideo, and above and below Mankato; Otter Tail river, above and below Fergus Falls.

The results of these several examinations will be published by the geological survey as soon as possible after the year's work has been completed. Much desirable information will be furnished by this report, and great benefit to the state may be anticipated; and it is not too soon that the people should know how much the streams are being polluted from which they draw their supply of water for domestic and drinking purposes.

While we already know many of the rivers are polluted by sewage from cities, factories, and washings from cultivated lands on their banks, it has been presumed that streams purify themselves as they flow onward, but the safety line of distance for the purification has not been established, and it must necessarily vary with the quantity of water in the mixture, and the rapidity of the current.

It is generally supposed that all deep wells and flowing springs from the surface must be pure; but examination of these demonstrate the fallacy of this belief, as the purity of the water must depend upon a pure supply at the source, and upon a freedom from all contaminating influences through the soils to its exit.

Original Articles

Placenta Previa and Its Treatment, With Special Reference to Combined Version.

By Dr. Daniel Longaker.

Read before the Obstetrical Society of Philadelphia.

The report includes seventeen cases, all of which were seen by the reporter and all but two treated by him. There was but one maternal death, the last he had treated. In this case as well as in the others, combined version was elected. The placenta was completely over the os; labor at term; moderate bleeding; child presenting transversely. The patient was a multipara, and since reading the paper it was learned that she had committed an abortion on herself about a year earlier.

The infant was born by the woman's unaided efforts after version in forty-five minutes. There was no bleeding and none until the manual removal of the placenta, which was markedly adherent. After this moderate oozing continued in spite of an intrauterine gauze pack; death occurring in three hours.

Combined version yielded the most brilliant results in the earlier cases, from the earliest period of fetal viability to the thirty-sixth week, and it acted as a most certain means of controlling hemorrhage and of exciting labor pains. It was a certain means of inducing labor. The operation is easy; and the smaller baby stands compression better than the larger one. At least in six of the eleven cases was the baby born alive, and only eight of the entire eighteen were saved. (There was a case of twins.)

In every one of the cases of combined turning at or near term the baby was lost. The operation of internal version afforded no better results and was mentioned only to be condemned.

One case, a short head first labor, with dead baby, illustrated the inherent dangers of the situation for the child.

The method of combined version is believed to be free from danger if the rules laid down by all authorities from the time of Hicks be followed. The most important are to introduce one or two fingers; turn, and wait. The waiting does not mean added risk to the child, in the author's opinion and experience.

It would be more rational to pay as little attention to the fetus in placenta previa as in ectopic pregnancy; then the warning hemorrhage would be the signal for active aggressive interference, and many cases would be safely disposed of in the later months by combined version. Some of those reaching term would be disposed of by the same plan; others by gradual mechanical dilatation, rupture of membranes, and forceps. All, however, would be actively treated in realization of the fact that the woman's safety lies in evacuation of the uterus.

The danger from hemorrhage would be greatly lessened; but there still would remain the remoter ones of septicemia an embolism and rupture of the uterus, to all of which complications the peculiar conditions predispose. There would remain a small maternal mortality—legitimately.

Of the seventeen cases reported in ten the placenta was centrally implanted, in six marginal, and in one not given. Combined version was employed in twelve instances, internal version in three and in two cases the membranes were ruptured and forceps applied. There was only one maternal death and ten fetal.

Discussion.

Dr. E. E. Montgomery: It is with considerable temerity that I rise to open the discussion of an obstetrical paper in the presence of a number of Philadelphia's leading obstetricians. It seems to me rather a paradox that I should be placed in such a position. I was greatly interested in the papers read, and the record shows that, although these cases covered a period of a number of years, some of them having been delivered before the methods he emphasizes were particularly advocated, it is evident that the management of these cases is excellent. When we come to look at the side of the mother, the record as made leaves little to be desired. We have, however, to keep in mind that in this class of patients, we have to consider the interests of two individuals. The best record that has been made under this plan of procedure in a large number of cases has been pretty close to that which the doctor presented here tonight, about 55 per cent mortality for the child. It was my privilege to read a paper before The Philadelphia County Medical Society in 1883 upon the subject, "Is Craniotomy Justifiable for the Living Child?" In this I took the ground that it was not. Following the same line of thought it occurs to me that any plan of treatment which affords a mortality of 55 per cent for the child, is one which should lead its practitioners to consider earnestly whether there were not other measures that afforded but little increased danger for the mother, and greatly increased opportunities for the child. The plan of procedure I have in view is that of Caesarean section. I appreciate the fact that it requires a considerable amount of moral courage to urge upon a patient who is certain for an opportunity for delivery with a mortality of one per cent, the necessity of an abdominal incision with its well known perils, for the sake of her child. There are many cases, however, in which the birth of the living child is of very great importance to the parents, and in which they are willing to take great chances, and it seems to me it would be the better part of the obstetrician in every case where the symptoms indicate the presence of a placenta previa to make known the dangers and possibilities that might be afforded for their escape for the child through some operative interference. The hemorrhage in these cases gives an indication of the character of the trouble, and enables the physician to prepare himself to perform the operation under careful aseptic precautions. He is able to choose the time when the operation should be done. There are cases, especially those in which the cervix is rigid, where dilatation is likely to be slow and difficult, that Caesarean section would afford an increased advantage for the mother. In the performance of the operation it is important that the patient should not have been subjected to careless manipulation or examination previously. When the patient has been so subjected, we can understand that infection may have been conveyed which will render operative procedure dangerous, and possibly destroy the opportunities the patient might otherwise have had for successful result. As I have said, the plan of procedure which I have had opportunity to practice myself in a few instances during the time when I did obstetrical work, is that which affords an excellent opportunity for the life of the mother, the Braxton-Hicks method of version, which has been so well described tonight. It is, however, in those cases in which the placenta covers a good portion of the uterine orifice, a procedure exceedingly dangerous to the child.

Dr. Stricker Coles: Dr. Longaker's mortality is about 5 per cent for the mother, and about 50 per cent for the child. He has in that, of course, some cases of central placenta previa, and that should go to this credit, because that is given as the mortality of the lateral varieties. When we come to the central placenta previa, Truesdale gives a material mortality of about 18.9, and a fetal mortality of about 70. He has collected from a large number of cases and has had the best mortality statistics I have been able to see. These figures give us an idea of the danger of this condition.

Many of these cases come to us late, and when hemorrhage has occurred I do not think we can expect to save the child. After a woman has bled until she is almost pulseless and exsanguinated, the chances for a living child are very slight. Two cases have come to me lately in which the child was nearly seven months, and in each case I performed version and used the foot simply as a plug, trying to get the patient to react. In one case delivery occurred in twelve hours; in the other, six. Both mothers made good recoveries. In such cases we cannot expect to save the child. In cases when the child is not very large, it can often be saved by the method of version, and by taking more time than one would when the child is larger. The cases in which the child is large, the patient having gone nearly to the full term of gestation, I think are much more difficult to treat. In such cases it is difficult to be absolutely certain of the best thing to do, and we have to judge each case by itself. Version and slow extraction will lose a great many children, but if the children are hurriedly extracted the maternal mortality is increased. With Caesarean we have a mortality in the last five years of about five per cent. Statistics show us thirteen cases of placenta previa operated upon by Caesarean section, with a mortality of 44 per cent for the mother, and these operations we find have been done as a last resort. That does not give us the information we need. If in these thirteen cases no other treatment had been tried, we could draw some conclusions; but this mortality of the thirteen cases operated upon by Caesarean section is much too large. The reason for that is that some of these cases have been operated upon by Porro operation and have been desperate cases. What would be the mortality of Caesarean section if we could get the cases in the early stage? Control hemorrhage for a short time by packing with iodoform gauze until ready for operation.

In all of Dr. Longaker's cases in which the child was well advanced the mortality was much greater. You will find that if you deliver a large child hurriedly through a rigid cervix and when the placenta is attached above, and is soft and vascular, you are going to have larger lacerations and more hemorrhages and of course the danger is greater. I have never done Caesarean section for placenta previa, but if I should have a case I do not expect to do a Porro operation or celio-hysterectomy, but a celio-hysterotomy, leaving the uterus in. With a cervix not dilated or torn I think we would be able to control the hemorrhage by tamponning the uterus with iodoform gauze.

I think there is a field in some of these well advanced cases of pregnancy with central placenta previa for Caesarean section, and will expect to see the mortality for mother and child reduced, especially when these cases are placed early in a hospital, or preparation made for prompt treatment at their homes.

Dr. Oliver Hopkinson, Jr.: I think every case of placenta previa is a law unto itself, and the best results will follow careful study of each case. The advantages of the different operations depend greatly upon the variety of placenta previa. The safest plan, I think, is by the old Braxton-Hicks method—dilatation just large enough to admit grasping of the foot. My habit is to grasp the anterior foot, if possible, and after extraction, use it as a tampon, either allowing the labor to end spontaneously, or use it as a plug, if there be an excess of hemorrhage. I think that method the safest for the mother. I believe the life of the mother and child in placenta previa are antagonistic, and, trying to save both, you are likely to lose the mother. I have reported a case of Caesarean section done for dystocia, not for placenta previa, but in which marginal insertion of the placenta was found. The ease with which it was removed and the little hemorrhage following, gave us very great encouragement for that operation in this complication. I do not think, however, that any one would recommend Caesarean section for marginal placenta. I believe the diagnosis of the variety of placenta previa cannot be made until the os is fully dilated. If the fetal heart is heard, and the mother is in good condition, I think Caesarean section would be the operation par excellence. I have never seen a case so far in which it would be indicated. I cannot agree with what has been said about waiting for the viability of the child. As soon as the diagnosis is made of placenta previa the uterus ought to be emptied by one process or another.

I would like to ask the members whether in performing internal version they make use of one special hand. I have been using the right hand, not considering whether the extremities lie on the right or left hand. It seems to me I get more dexterity in using the same hand internally for all cases. If the child lies transversely I take hold of the lower foot, as there is less liability to turn the child with back posterior.

Dr. George M. Boyd: I have enjoyed very much Dr. Longaker's paper and agree with him fully in the treatment he has mentioned. I think the paper brings out first the necessity of carefully studying all cases of antepartum hemorrhage, and impresses upon us the necessity for a careful diagnosis in antepartum hemorrhage, for the early diagnosis will mean often the successful treatment. The treatment in my opinion will depend upon whether you get the case early or late. If the patient has bled profusely and the pulse is rapid there is nothing to do but podalic version as a method of tamponing the cervix or plugging the uterus and emptying it. In central placenta previa, if the diagnosis is made early; if the child is viable and the patient in good condition, it seems to me we are not doing our full duty unless we tell our patient of the danger, the high mortality to the child and give her the privilege of selecting between the two methods of treatment, podalic version or Caesarean section. I, however, feel that Caesarean section has only a very small field of usefulness, and that we should teach combined version. In some cases the Hicks method can be carried out, but in many it is unnecessary to deliberately enter the uterus and bring down the foot. My course has been slow delivery, after having accomplished version. I agree with those who state that rapid delivery means a higher mortality for the mother. I have enjoyed very much hearing the report of Dr. Longaker's cases, and only on Tuesday I saw a case in consultation, seen six hours after a frightful hemorrhage had occurred. The case followed somewhat the history of one of the cases reported by Dr. Longaker, and I will ask the privilege of showing the placenta in this instance. As stated, I saw the patient six or seven hours after a severe hemorrhage. She was brought into the hospital, and when I saw her the pulse was 130. She was very much bleached and the diagnosis had been made of placenta previa. The child was at term. The foetal heart was faintly heard. A slight hemorrhage had occurred the previous day. Because of the amount of hemorrhage and her general condition the only method of treatment to be considered was podalic version. With a great deal of difficulty we finally succeeded in delivering her of a child at term. We did not have great difficulty in performing version, but in spite of giving the patient some time to deliver the shoulders, no progress was made. The arms were extended, and it was necessary to go in and bring them down. She was in an extreme condition after delivery and it was necessary to resort to venous injection of saline solution and hypodermoclysis. That was on Tuesday evening. She is living, but that is about all. I saw her today; she has still an exceedingly rapid pulse. The point of interest is that after the delivery I found this large placenta resembling somewhat the placenta membranacae, or membraneous placenta, where the greater part of the chorion is covered with placental tissue. It took me half an hour or more to separate the placenta from its uterine attachment. It was finally separated and a uterine tampon inserted. The lower portion of the mass shows the thicker portion which was down in the cervix. It was necessary to go through the placenta tissue in performing version.

Dr. George Erety Shoemaker: Dr. Longaker is to be congratulated on the results which he is able to present, considering the class of cases which he has had to deal with and the conditions surrounding them. They were not in maternity hospitals, but were taken as they came, often in poor condition from hemorrhage, under poor surroundings, and his results are excellent. The question as to whether version is the best method of handling placenta previa depends on just that point. Is there any other method known which could take the eighteen cases just as they stood at the time they came to Dr. Longaker and yield him a mortality as low as that which he has given? I think the answer must be that there is no other method. Tamponing and forceps and Caesarean section certainly would give a larger mortality, both for mother and child. As to Caesarean section, it seems to me that that is a procedure which can only be considered in a very few selected cases seen and diagnosed early, under good circumstances, and where, for some extraordinary reason, the life of the child is of such importance that it can offset the increased danger to the mother. Caesarean section even in the hands of the most expert has not yet reached the state where the maternal mortality is as low as in the average delivery by podalic version.

Dr. I. P. Strittmatter: I am sorry that I was so long delayed as to hear only a part of Dr. Longaker's paper, but from the discussion I gather that his method is podalic version and Hicks delivery. From my observation in 2,-100 obstetrical cases I have seen five of placenta previa, one of complete placenta previa in which the placenta was adherent over the internal os and four cases of partial or marginal placenta previa. The method which I have pursued, and which I think I would pursue again under similar circumstances, has been to make an examination as soon as hemorrhage appears. If the os is not sufficiently dilated, it should be dilated enough to see what is the matter. Having determined this, the portion of placenta contiguous to the internal os should be detached, the os packed with iodoform gauze and then the case should be studied. It is hard sometimes to determine the proper course, especially when the surroundings for operations are unfavorable. This, however, gives us time, and time is a very important element. In one case of placenta previa hemorrhage occurred five weeks before delivery. It was a slight hemorrhage, but it was very easy to make a diagnosis. By packing the cervix with iodoform gauze, allowing it to remain for 72 hours, washing out and repacking there was no recurrence of the hemorrhage until the time of delivery at eight and a half months. The placenta was not perforated. The foot was seized and the delivery accomplished, using the child as a tampon, with a favorable result for both mother and child. In one case of almost complete placenta previa a similar course has been adopted, but owing to a disturbance in the family, the husband having become insane and attempting to attack both doctors and attendants, the mother and child were both lost. While in the act of delivering the child, the door was broken down by the husband, and the result was a mortality of 100 per cent for both mother and child.

In partial placenta previa packing with iodoform gauze and watching the case has yielded good results. In three cases podalic version was performed with recovery to mother and child. In the fifth case the child was delivered with forceps. This case was very interesting, because it was impossible to keep the packing in its proper place by the ordinary methods, and it had to be held in position to dilate the os for the use of the forceps. The hemorrhage was slight in the beginning, but it did not recur after sufficient dilatation had taken place to allow the occiput to enter the external os. Personally, I am in favor of podalic version in every instance when there is slow dilatation of the os or inability to control hemorrhage by packing with iodoform gauze. When the hemorrhage can be controlled I think it is better to wait for a time, particularly so, if there has been severe hemorrhage. If you add to a severe hemorrhage the shock of podalic version and delivery, however, slowly accomplished, the chances for the mother and child, in my opinion, would be worse than by waiting a reasonable length of time. In the meantime normal salt solution might be used or the heart be toned up.

With Caesarean section I have had no experience, but in complete placenta previa where it is very desirable to save the child, where there is little likelihood of another child, I should not hesitate to recommend Caesarean section as the operation of choice, if the diagnosis can be made sufficiently early and if a severe hemorrhage had not lowered the chances of the delivery of a living child.

The early diagnosis in placenta previa is everything, and every patient applying for obstetric service, in the presence of any hemorrhage, should be carefully examined and her case carefully studied. If this examination does not yield a decisive result as to the cause of hemorrhage it should be repeated until a result can be obtained. This offers the best chance of a successful oùtcome of the case.

Dr. John W. West: I regret not having been in time to hear the paper. My treatment of placenta previa has been podalic version in every case. I have yet to meet a case in which dilatation could not be readily made sufficient to allow podalic version. I would be unwilling to leave any case of placenta previa after diagnosis had been made, without the attendance of an obstetrician or some one able to resort to the necessary treatment for the emptying of the uterus.

Dr. Richard C. Norris: The emergencies of obstetrics are always interesting, and the one under discussion is especially so, not alone from its serious character, but from the fact that it requires the greatest skill and coolest judgment of any obstetric emergency we encounter, except perhaps, postpartum hemorrhage. We cannot select a plan of treatment suitable to all cases. We start out with that basis for our discussion. There are three main conditions which would determine the course of action in any given case: The state of the cervix; the degree of hemorrhage; the variety of the placenta previa. Now, it is well known to those who have had experience with these cases, that where lateral or marginal placenta previa occurs the hemorrhage may be slight; often, indeed, not recognized unless the physician studies the attachment of the amnion to the placenta after it has been delivered. I have records of several cases in which I would not have known I had to deal with a case of placenta previa, if I had not studied the placenta after it was delivered and noted the location of the opening in the amniotic sac. When we diagnose the variety of placenta previa accompanied by moderate hemorrhage it is not necessary to do version. The application of the forceps and drawing the head into the pelvis will be the appropriate treatment. If the os is not sufficiently dilated to deliver with forceps, the membranes should be ruptured and a rubber bag be applied inside the amnion and be made to press against the placenta by continuous extraction to control bleeding.

We come next to the cases of undilated cervix, the placenta being central or a large margin over the os. We are confronted with a grave emergency requiring judicious and prompt treatment. It is agreed among obstetricians that, as soon as the cervix is dilated, version is the ideal treatment. There are very few even aggressively surgical obstetricians who would gainsay that. Usually placenta praevia announces itself by profuse hemorrhage, the patient is partly exsanguinated, and the cervix as a rule is sufficiently dilated to introduce one or two fingers. I have never seen a case of placenta praevia in which two fingers could not be passed through the cervix when there had been profuse hemorrhage. This means that a dilating rubber bag can be introduced, and this to my mind is the best treatment to employ until there is sufficient dilatation. We rupture the bag of waters, introduce a large hydrostatic bag, fill it and make gentle but continuous traction to compress the placenta until we have sufficient dilatation to do version.

Cases of the central variety should be handled with the greatest expedition. It is this type of cases that is most serious from the standpoint of hemorrhage during and after labor. Here the proper thing is to not waste time with tampons or rubber bags or any artificial means to plug up the cervix, but we must manually dilate it sufficiently to introduce two or more fingers and do bipolar version.

From the state of the cervix, the variety of the placenta praevia, and from the degree of hemorrhage, we see that we cannot treat all cases alike.

When we come to study the question of delivery after version, I think every obstetrician realizes the danger of rapid delivery. The lower uterine segment, thinned, overstretched and oedematous, is readily torn and severe lacerations and hemorrhage can follow the speed that you would use ordinarily in extracting. There will be some cases even after version in which the hemorrhage may not be entirely controlled, and here it is well to remember that by slight and steady traction on the foot the hemorrhage can be controlled without injury to the cervix. The doctor should bear in mind not to produce lacerations, for we know that frightful hemorrhages occur, and I am surprised that no one has spoken of this great danger of profuse bleeding after the child has been delivered, due either to laceration or to failure of retraction of the lower uterine segment. Version, when it can be done, a hydrostatic bag and traction until the os is sufficiently dilated to perform version, I have found satisfactory treatment in these cases.

When we consider the maternal and fetal mortality of placenta praevia and determine to try Caesarean section to improve it, we must remember the unfavorable conditions. The majority of cases are premature births. We have to deal with a premature child and with a child that is more or less exsanguinated. The infant mortality is and always will be great despite the more rapid delivery. These cases are not ideal cases for surgical interference of any kind. Early diagnosis and prompt surgical treatment before exsanguination is a Utopian fancy born of inexperience. If we recall our summons to such cases we will remember that the patient is exsanguinated when we get to her. It is not along the line of practical obstetrical work to say we must diagnose early and do Caesarean section. We do not have opportunity to diagnose early. That fact alone will exclude Caesarean section except in a very small proportion of cases. After a serious hemorrhage has occurred, to attempt Caesarean section on a patient who is exsanguinated, and thus hope to save a premature baby also exsanguinated, is to my mind, an operative measure almost never warranted and which in a large series of cases will give no brilliant results. You will find in many of the cases when starting out to do a hysterotomy, that a hysterectomy is necessary to control hemorrhage. Ligation of the uterine arteries will be necessary. We will often have to sacrifice the womb if we want to save the patient's life. Zinke reported some 12 or 14 cases, and my recollection of the history of these cases is that they convinced me that Caesarean section is of little real practical value for placenta praevia. If we could meet the cases under ideal conditions, the operation might be practicable, but we do not get the cases under ideal conditions. I doubt the possibility of making a diagnosis of placenta praevia before hemorrhage occurs and at a period of pregnancy when the child is viable. Our present aim should be to improve maternal mortality and I doubt that Caesarean section can ever do that for us. I agree with what Schroeder said: "That man will have the best results in placenta praevia who least regards the life of the child." The conditions inherent in placenta praevia are against the child. You cannot compare the results of Caesarean section for other conditions with those of placenta praevia and hope to have a similarly low mortality. Just as it would be better to operate on all cases of extrauterine pregnancy before rupture, if we could diagnose them, so would it be better in placenta praevia to diagnose the cases before hemorrhage occurs. But that is impossible. Therefore, from the unfavorable conditions inherent to placenta praevia for both the mother and the child, I predict that as time goes on, Caesarean section will pass away as a means of its treatment, and that more and more will we depend upon version and slow extraction as outlined in the paper tonight.

I would lay stress upon the dangers of the third stage of labor in these cases, the hemorrhage following the birth of the child. No one should attend a case of placenta praevia without having at hand the appliances to treat this alarming condition. The insertion of a utero-vaginal tampon from the fundus to the vulva, kept in place for 24 hours, and gradually removed, is the only treatment. To attempt to stitch any lacerations is a loss of valuable time. We avoid some of these cases by slow delivery.

In conclusion I can only say that from my experience and my knowledge of the experience of obstetricians throughout the world, Hicks has done more to reduce the mortality of placenta praevia than has been accomplished by any other treatment, and that placenta praevia can never be practically treated by Caesarean section. It is the idealist who hopes for better conditions, but when we come to realize the practical obstacles, our cool and dispassionate judgment will show us conditions present in placenta praevia which prevent the operation of Caesarean section from being one of choice in its treatment.

Dr. Charles P. Noble: I am sorry that I did not hear the paper. I understand, however, that it advocates bipolar version in the treatment of placenta praevia. My own experience leads me to take that ground most decidedly. While I have not had a large experience, I have had the happy fortune of seeing all the mothers recover. Two cases in which I was consulted, ended fatally because version was not done promptly. The patient bled to death before version was attempted. Aside from these personal results, I think the statistics of the treatment of placenta praevia in general, bear out the belief that the Braxton-Hicks method of version gives us the best results. The important point is that we should do the Braxton-Hicks method and not wait for dilatation in order to do podalic version. Certainly it must be extremely exceptional that version praevia must be exceptionel when one or two fingers can not be introduced even before labor actually sets in. Because of the location of the placenta in placenta praevia in the lower segment of the uterus, in my experience the cervix has always been soft and dilatable, and even if not dilated I have never had any difficulty in introducing one or two fingers, and I personally have never had any trouble in doing bipolar version under these circumstances. I think this is one of the most important points in the whole matter, because if we wait until the whole arm or hand can be introduced into the uterus, the patient may have lost so much blood that no treatment will save her life. In my experience the most important point is that we shall not wait to obtain full dilatation but introduce two fingers and get a leg down. After the leg has been drawn down I am quite in accord with the statement that the case should be left to nature and that extraction should not follow version. There is no doubt that if we follow this plan more of the children die, but more of the mothers live, which I think is the more important of the two. In multiparae with roomy soft parts extraction may be practiced in the interest of the child.

I have never done Caesarean section for placenta praevia and perhaps am not entitled to speak on the subject. Upon theoretical grounds it does not recommend itself to me in any ordinary case of placenta praevia. It might be indicated when contraction of the bony pelvis exists as a complication; or in very exceptional conditions of rigidity of the soft parts in elderly primiparae with central implantation. It does not seem to me that the field for Caesarean section in placenta praevia is more than very remote. I agree with Dr. Norris that to get the patient under ideal conditions must be very rare. I think also that the point raised by Dr. Norris is a very important one, that when we resort to Caesarean section, in not a small percentage it may be necessary to do a Porro operation rather than Caesarean section in order to control bleeding; in other words, to sacrifice the woman's regenerative organs. This, I think, is a strong argument against the large use of Caesarean section in the treatment of placenta praevia.

Dr. Longaker closes: I want to thank the members of the society for their very kindly notice of my paper. The practical difficulties that present themselves to my mind in consideration of Caesarean section have been so fully answered by Dr. Norris that there remains nothing for me to say. I would like to say in regard to Dr. Boyd's suggestion that if the question of selecting Caesarean section be left to the patient and her friends, I am sure not one of us would do this operation in placenta praevia. In reading Hicks' monograph recently, I find that he sums up the advantages of combined version over the internal method. It will make you smile when you read that one advantage of the combined method is that it can be done without removing one's coat.

Dr. Hopkinson asks a question about the hand used. I have never ceased to be thankful to one of my teachers, Dr. Penrose, for the very emphatic way in which he impressed that point upon our minds in his lectures. He would say, "Use that hand, which, when held between pronation and supination the palm corresponds to the child's abdominal surface." It is a very good rule, and I follow it in doing internal version. Version is usually feasible by the combined method. The head is easily displaced. The shoulders come into contract with the intrauterine finger, the other hand depresses the breach, and the knee and foot drop into the intrauterine finger's reach. An assistant or an intelligent nurse can often render useful assistance by making pressure upon the fundus. Up to the time of the occurrence of my last case, which ended disastrously, I was almost prepared to say that this method was ideal and practically abolished maternal mortality, and that if the case be not too hopelessly infected by midwives and other attendants before one sees it, one can practically abolish even maternal morbidity! (A large percentage of my cases passed through the puerperium without any fever or sign of infection whatsoever). That one case, however, destroyed this beautiful illusion.

Hysterectomy for Cancer of the Ulterus.

By Ernest W. Cushing, M. D.

(Continued from last month).

To accomplish this the edge of the broad ligament, where the stump of the ovarian artery is held by its ligature, is lifted up and the peritoneum is divided with blunt scissors, or on a director, sufficiently to reach the bifurcation of the iliac artery, or about three inches.

The ovarian vessels follow the flap which is lifted up. The ureter must be found as it comes up from the side of the pelvis, substantially parallel with the iliac interna. The ureter is freed and pushed downward and inward, disclosing the fat and glands at the bifurcation of the vessels. These tissues are carefully removed, just as in the axillia by the fingers, or by tearing them out with a clamp or with a forceps without sharp teeth. The arteries are not easily injured, but the great veins must be respected, for if they are torn we are in the presence of a surgical accident of some gravity. The internal iliac vein may be tied without bad results, but in the only case reported (by Kelly) in which the common iliac vein was torn, although hemorrhage was stopped by successfully tying the vein, yet the leg became gangrenous.

All visible glands and all fat which may contain glands having been removed, the cut in the peritoneum on each side is united with catgut as far down toward the bladder as possible. The peritoneum is cleansed, all sponges removed and the ureters laid as far as possible in their proper position, the omentum is pulled down and the abdomen closed.

Next the patient is placed in the lithotomy position and the uterus is pulled down, the everted vagina is carefully cleansed and disinfected, and the diseased tissues enveloped in a pad wet in bichloride solution. The vagina is then severed well above the disease, when the uterus is pulled out, followed by the pad which had been sewed to the fundus.

The free edges of the pelvic peritoneum are easily found, brought down and united with catgut, although this is by no means essential.

The vagina is tamponed with gauze and for the last twelve years I have always used a convenient adaptation of the Miculicz packing for tamponing the vagina in cases of vaginal hysterectomy. A square of gauze is seized by the middle with a clamp and introduced as far as may be necessary. The gauze is then fitted with the fingers to the pelvic space and into the bag thus formed strips of gauze are introduced sufficiently to stop all oozing. This method has the advantage that the strips may be removed singly on the next day, relieving pressure on the bladder and rectum; but the bag remains for several days until the raw surfaces are completely roofed over by adhesions.

Causes, Consequences, and Care of the Injuries to the Parturient Canal.*

By Benson M. Feldman, M. D.,

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New York.

*Read at a meeting of the Manhattan Clinical Society.

It is no exaggeration when I claim that a large portion of the work of the operating gynecologist is but a consequence of, or a sequel to, the inefficiency of the general practitioner in obstetric work.

This paper is based principally on a long personal experience, and if I succeed in convincing the general practitioner that he should feel his responsibility more in cases of obstetrics, and exert every effort to forestall the gynecologist, I shall have accomplished something which will rebound to the satisfaction of every physician, who in the triumph of having delivered into this world another human being, will not have to face well-deserved blame subsequently.

I do not care to burden you with a recital of histories, and I cannot include lacerations or ruptures of the uterus above the cervix, as that would make my paper too lengthy for the time allotted.

The varieties and causes of tears in the various portions of the genital tract are many. In the cervix we have the slight unilateral or bilateral lacerations, which occur in primiparae consequent upon a rapid second stage, when the first stage was of too short a duration properly to encourage or complete dilatation.

The lacerations of the cervix may be multiple, especially as a result of manual or instrumental dilatation or other interference. Cases of annular laceration, in which a complete ring of the cervical margin was torn away by forceps, are on record. Cervical laceration may extend in any direction and any distance upward and outward.

Application of forceps, or even spontaneous delivery, while the patient has a full bladder or rectum, may produce injury. In the hands of the general practitioner undue haste in the forcible dilatation and application of the forceps probably causes the largest number of cervical injuries.

Certain forms of dystocia, among which we may mention disproportionate size of the head and shoulder and breech presentations, are responsible for them.

High and medium forceps applications may produce quite extensive injury to this part of the uterus; the tears sometimes extending into the fornix or the lateral ligaments.

I recently saw one case of medium forceps delivery, the second traction position having been assumed too early, in which the resulting tear extended through the cervix on the left side, the lateral wall of the vagina, and all neighboring tissue, so that upon introducing the hand, one could feel the external surface of the entire rectum, which had thus been exposed.

Injuries of this nature are due either to unskilful instrumentation or bad judgment. By the latter I mean that, when the dystocia existed, version with the head still above the pelvic brim, or some other procedure, would have been more advisable. Insufficient dilatation at the time, of the upper part of the canal and cervix may be the cause of injury.

These severe lacerations extending beyond the vagina attachments are most frequently the result of pulling out the after-coming head in breech deliveries, when the cervix is insufficiently dilated or when it has retracted around the head after the shoulders have escaped. Wedging in of the anterior lip between the os pubis and the child's head may be a factor in the production of the cervical tear. In occiput posterior positions one should always look for cervical lacerations, although this variety is usually not complicated by hemorrhage.

Dr. J. Duncan Emmet has reported a case of double laceration of the cervix and laceration of the anterior and posterior vaginal walls. This was probably produced by forcing a hip through the cervix, when only one leg was delivered. In placenta praevia pulling the hip through too rapidly severely lacerates the cervix. A flexed knee, wedged in one side, if forcibly withdrawn, may produce a severe injury to the cervix.

Among the unavoidable causes are tumors in the lower uterine segment, or protruding through it, and atresia of the os externum and cervical canal, due to inflammatory processes or to the old-fashioned method of cauterizing the cervix and from scar tissues.

The consequences of injuries to the cervix are immediate and remote, both of which place the patient's health and life in jeopardy. Postpartum hemorrhage is a frequent immediate result, sometimes exsanguinating the patient, and it may even prove fatal.

Even with a thoroughly contracted uterus, the cervical laceration may bleed sufficiently to warrant the condition being characterized as an extensive postpartum hemorrhage, on examination the blood being felt trickling along the finger. If this tear extends into the parametrium, there may be bleeding into the peritoneal cavity. Another, and pathologically more important consequence, is the exposure to infection, to which the puerperal woman is liable. It is a question whether the cervical tear is more frequently the point of entrance for infection than are lesions in another part of the canal.

In my experience, more sepsis has developed in cases in which the floor of the pelvis was involved and in complete perineal rupture.

Every practitioner has encountered those well-known results of cervical laceration, such as endometritis, subinvolution, hyperplesia, and the consequent prolapsus. We may get subinvolution without inflammatory changes.

In recent years our best gynecologists have come to recognize cancer of the cervix as one of the remote results of cervical laceration, if the same is not remedied by plastic operation, which also removes the scar tissue. H. J. Boldt, in Keating's work, page 604, with reference to the etiology of uterine cancer, says: "We may consider a long continued cervical catarrh, with erosion and also cervical laceration, causing such pathological changes, as direct etiological factors."

Before proceeding to any consideration of the next portion of the parturient canal, I wish here to impress upon the physician engaged in obstetric work the great importance of making a thorough examination of the canal, after the placenta has been delivered, even if there is no unusual amount of hemorrhage. The aseptic fingers can positively do no harm in the puerperal vagina. I cannot be too emphatic in advising this procedure.

The tears occurring in the fornix and the upper part of the vagina are generally continuous with those of the cervix; yet isolated lacerations of this part of the vagina do occur; especially do the blades of the forceps occasion these rents, if they are not properly applied. They are of considerable importance on account of their proximity to the peritoneum, and thus they lay bare the parametrium to the dangers of infection.

These tears may result in fistulous communications between the bladder and the rectum, in vesico-vaginal fistulae, or in tearing away of the vagina from the bladder, which means a vesical prolapsus.

Hedra, in the first volume of the Medical Register, says, "Many of the ill results following delivery are due to injuries in the vaginal fornix and the upper part of the parturient canal and are consequently overlooked." They are overlooked because they give rise to no special symptoms.

A rare variety of injury to the anterior vaginal wall is well described by Hedra, in the article just mentioned. "The impacted head, in its further progress, tears loose the upper portion of the anterior vaginal wall from the bladder and from the anterior surface of the cervix, turning it into a loose pouch, which the bladder will have to follow on account of gravity."

The impacted head may do similar damage posteriorly, separating the posterior wall from its adhesions to the surrounding tissue. There may be a longitudinal, oblique, or antero-posterior laceration of one side of the upper vagina, caused by the forcible introduction of the first or second blade of the forceps. A transverse laceration of the posterior wall of the upper vagina may be due to a transverse head position, with contracted pelvis.

Lusk, in his "Science of Midwifery," states: "In contracted pelvis, when the head is embedded in the brim of the pelvis, the overdistended vagina may give way, in which case the laceration occurs in the transverse or oblique direction, and usually upon the posterior wall."

Among other causes are vesical calculi of large size, which may tear into the anterior vaginal wall by becoming impacted during the descent of the child's head, and the presence of unyielding cicatrical tissue from atresia vaginae, the result of constitutionel disease or former injuries.

Dr. F. W. N. Hazelton, in the Journal of Obstetrics and Gynecology, February, 1902, reported a case of lacerated vagina, in which a dermoid cyst of the ovary was forced through the posterior vaginal wall by the head of the child. The rent was large enough to admit a strip of iodoform gauze two inches broad and four feet long.

Deep tears posteriorly or laterally in the vagina will, on exposure with a speculum, show small jets of blood, which amount to constant bleeding, and they sometimes lay bare a large vein, especially if the patient has piles. Injuries in this particular locality do not necessarily occur or become apparent at the time of delivery. The parts undergo considerable pressure in dystocia, and the resulting necrosis goes on during the puerperal week, at the end of which time it begins to produce characteristic symptoms.

Postpartum pelvic exudates and pelvic abscesses are but septic infections, due to the absorption of the micrococci through the break in the tissues, although they may also occur as secondary to septic endometritis and gonorrhoeal infection. Cystocele, rectocele, and atresia are frequent sequelae.

The pelvic floor is the bane of the accoucheur's life. Not only in difficult labors, but in comparatively mild cases, we are often surprised to find, when the patient first leaves her bed, or at the usual postpartum examination six weeks later, that there is quite a relaxation of the vaginal outlet—in fact, a sinking of all the supporting parts. One should always think of the possibilities of this condition when making an exploratory examination for injuries immediately after delivery, and not be surprised at finding how thin the tissues are between the vagina and the rectum. On this examination a postvaginal injury to the muscular group can be demonstrated, which is usually ascribed to overstrain or distention at labor. We find no surface evidences of the lesion, unless it results in the formation of haematoma, which betrays itself by the postpartum vaginal pain it produces.

The latter consequences of these relaxations can easily be recognized, and ar[illegible] common occurrence. This condition of relaxed vaginal outlet is principally found in elderly primiparae, over thirty-five years of age. In this class of patients I expect this condition, although the examination did not divulge it, if during their childbed week they complain of pain in the region of the sacrum.

Some authorities estimate the frequency of lacerations of the pelvic floor and perineum at 35 per cent of all cases, in first labors and 10 per cent in subsequent labors. We have several degrees and varieties.

The injury may involve only the posterior commissure of the vulva and about one inch of the vagina, tearing through the congested and oedematous mucous membrane, or it may extend almost to the sphincter ani, involving fascia, fibers of the sphincter vaginae, transversus perinei and levator muscles, and possibly even the sphincter ani muscle and the skin, and also from one to two or more inches of the rectum. This last-mentioned variety is the complete perineal rupture.

Many cases of central perineal rupture are recorded. Dr. Zangenmeister, in the Centralblatt fur Gynakologie, 1901, reports two forms of central rupture which are very interesting. The first patient was a young primipara: "At the time of the crowning of the occiput the vulva became more and more drawn to the front, the perineum became thinner and thinner—before an incision could be made, the perineum tore in the central part; immediately another tear extended forward to the frenum and to the anus." The second patient was also a primiparae: "As the head crowned, it pushed the whole vulva forward, the perineum became greatly stretched and the anterior margin of the vulva came close to the pubis. 9 crescentic tears appeared in front of the anus, followed immediately by a tear of the perineum anteriorly, through the frenum. This case exhibited, as a result, an ordinary tear of the perineum, and between it and the anus was a transverse tear, extending in front of the latter."

In my last case of central rupture, the child forced its way through the rent, continuing the tear anteriorly toward the fourchette. The mode of tearing in perineal lacerations varies with the causes operating. They usually proceed from above downward, or from within outward. We rarely find an external laceration without a coexisting internal tear, yet how often in our obstetric experience do we discover a most serious internal laceration without any external manifestations.

In primiparae and in forceps cases, there is no doubt that the head of the foetus is the only cause of perineal injury, and not the shoulders.

Dr. Herman, at a meeting of the Obstetrical Society of London, in 1901, described an interesting perineal rent, in the case of flat pelvis, in which, after the head had been extracted, the child's hand protruded through the anus; the uninjured perineum being between the anus and the head—the next pain drove down the shoulder, tearing through the rectovaginal septum, from above downward. In breech presentations, the introduction of the hand to relieve an arm, may extend a light perineal tear.

A few other causes for perineal injury are malpositions and malpresentations, scarred or rigid perineum, flat sacrum, a narrow pubic arch causing over-distention, and some reflex impulse causing a sudden violent uterine contraction which forces the entire child and instruments out with one pain.

In a case of the last variety, in which the contraction or labor pain occurred just as the blades of the forceps were being locked, a complete perineal tear resulted, extending up two and a half inches on the rectal wall.

Perineal injuries may give extensive bleeding with sloughing of tissue, may afford an entrance for infection, and later, if they are not properly repaired, may entail such consequences as prolapsus of all the pelvic organs. The almost fatal hemorrhage which may occur, with injury to the clitoris or vestibule, is, fortunately, very rare.

Prophylactic measures should be begun during the latter months of pregnancy. Hemorrhoids should be treated during pregnancy, especially in primiparae over thirty years of age. Atresia vaginae needs gradual dilatation. Bands of mucous membrane extending across the lumen of the vagina should be cut. During labor, especially when the accoucheur is pressed for time, the temptation to hurry matters is very strong, and it often leads him into making matters more difficult.

The amniotic sac should not be opened until dilatation is complete, although in vertex cases, if the position is not faulty, and there is no apparent disproportion between the head and maternal parts, the accoucheur may venture to cut the first stage short, after having satisfied himself as to the dilatability of the os uteri, yet in breech presentation, and still more in footling cases, it is absolutely necessary to prolong the first stage as long as possible, even if the bulging sac comes down to the vulva. The bag of waters must not be broken until the dilatation of the cervix is complete beyond peradventure, as this is the only chance we have of preventing the cervix from contracting around the child's neck, and thus interfering with the delivery of the aftercoming head; I will not call it retraction, for the condition must not be confounded with true physiological uterine retraction.

In cases in which the anterior lip of the uterus is wedged in between the pubic bone and head, and acts as an obstacle to the progress of labor, it should be pushed up with the side of the index finger, in the interval between labor pains, and kept there until the contraction is completed.

Before a resort to forceps, the accoucheur must not fail to have the patient's bladder and rectum empty. The employment of high forceps, I consider a capital operation, always a dangerous procedure, and it should never be done by the general practitioner, unless he has had considerable experience, for even in expert hands, the destructive results are sometimes unpleasant, although by the use of Tarnier's latest traction forceps we may reduce the degree of injury which may be occasioned.

Version is a wiser procedure, especially if the head is not yet engaged, or even if it is so engaged, but yet movable above the brim of the pelvic inlet.

Before applying medium forceps one should make a thorough examination for diagnostic purposes—the patient being anaesthetized, and the whole hand being introduced if necessary. Having made a diagnosis, the operator should follow the mechanism of labor in that particular position, so that in the extraction he may closely imitate the natural process, never forgetting that a rapid extraction does not signify skill. The grasp of the blades should be occasionally relaxed, thus allowing for rotation, which generally occurs spontaneously.

The alternate descent and recession of the head are the best means of overcoming rigidity, especially if the parts are small and the head is above the moderate size.

Great caution is necessary in the application of forceps in contracted pelvis; when the head has been wedged in for some time, before attempting to introduce the blades, one should always examine to see if a laceration does not already exist.

Version should not be undertaken until the dilatability of the cervix and upper part of the vaginal canal has been determined, and even with a dilated cervix there is probability of a tear, if the amniotic fluid has escaped prematurely.

As the head reaches the pelvic floor, the rapidity of its progress should be at the command of the operator, who should use chloroform, certainly in primiparae, to control the strength and the frequency of the uterine contractions, and thereby the rapidity of the expulsion, as it is just at this time that unforeseen injuries in the recto-vaginal septum begin.

As a preventative of laceration, one physician recently advised placing adhesive straps, two inches broad, on the perineal skin, extending from the labium majus on each side to the hip on the opposite side and another transverse strip over the perineum. This cannot be kept in an aseptic condition, nor can it save a perineum, which usually tears as a continuation of the rent started above on the postvaginal wall.

Dr. Weston has advised the introduction of a deep suture into the perineum, from side to side, when a complete rupture before the head descended upon the perineum is anticipated, so as to bring the parts into accurate opposition.

In two cases of elderly primiparae, in which I was certain that an extensive laceration would result, I introduced two strong catgut sutures in a curved fashion deeply into the pelvic floor, anterior to the rectum. The first traversed the tissues just within the nympha near the lower end, one-half of an inch in front of the anus, and came out at the same point in the nympha on the opposite side. The second started about a half inch lower down, closer to the posterior commissure, and followed the same course, anterior to or above the first one, but more deeply situated. The loop thus formed was elliptical and included the sphincter vaginae and transversus perinei muscles, perhaps some anterior fibres of the sphincter ani muscles, and possibly also fibres of the levator ani et vaginae muscle as well as some of the pelvic fascia. The result was gratifying in both cases, as it gave full control over the lacerated and retracted muscles, bringing them in close coaptation, and simplified the subsequent steps in the repair of the vaginal injury.

I fully recognize the importance of securing union of muscle and fascia separately, to assure a strong pelvic floor. This method does not produce a bundling of these tissues, but only holds the parts together until the other sutures are introduced, both perineal and vaginal. The method is of value in inevitable laceration, but the exercise of ordinary care will save many cases from injury if the obstetrician will control the advance of the head, thereby preventing too rapid extension of the same, and also caution the patient against applying too much expulsive effort while the occiput is passing through the distended vulva.

The forehead should not be allowed to slip over the distended perineum until the occiput is expelled. If this precaution is observed, it will rarely be necessary to "shell out" the head by pressure through the rectum.

Hofbauer, in the Centralblatt fur Gynakologie, No. 5, 1901, describes the following technique for the preservation of the perineum: "The right hand is laid flat on the perineum, the frenulum is left plainly in sight, and exerts a pressure forward upon the head through the perineum." When the posterior angle of the large fontanelle appears and the greatest circumference is passing, the head is rotated to one side to throw the strain off the perineum. This "anticipated external rotation" is about 40 degrees. The results, he says, are very good. After the use of forceps, the instrument is removed, when the large fontanelle appears and then the method described above is followed.

In occiput posterior positions, the head should not be extended, the anterior fontanelle not delivered, until the margin of the perineum rests in the nape of the child's neck. As this is the time when haste to deliver will do damage, it is better to allow half an hour to pass, after the head has reached the pelvic floor, before it is permitted to be expelled.

The instructions given in works on obstetrics are, support of perineum, pressure on advancing head, chloroform, forceps, and episotomy. With the careful and patient obstetrician these mean very much, yet in some cases any and all of them are of no avail.

In breech presentations undue haste will give considerable annoyance, and if the breech seems too large for the canal, Malcolm MacLean's method of dilating the latter by withdrawing the closed fist severel times is excellent.

We should use every effort to keep the head flexed, by well and properly directed abdominal pressure. When the cervix has closed around the neck of the aftercoming head, the extent of the injury is influenced by the amount of traction power exerted.

The methods of operative repair of postpartum injuries of the genital canal are so variously described by authorities, that I will confine myself to the treatment adopted in my own practice, and I believe my technique differs but slightly from others.

Lacerations of the cervix which are not extensive are not to be repaired immediately, but left for secondary operation, for spontaneous repair sometimes occurs in very bad cervical tears. If hemorrhage is excessive the utero-vaginal tampon of sterile or 5 per cent iodoform gauze left in for twenty-four hours, usually controls it.

In one case in which the laceration was quite severe, the tampon did not control the bleeding, and it was necessary to press down the uterus, grasp the lips with large forceps and run a catgut ligature around the angle of the tear before hemorrhage was stopped. I used vaginal retractors, and had the patient placed on the table, in order to render these postpartum manipulations less difficult, for it is this inconvenience which interferes with the proper obstetrical work in private practice.

Immediate repair of the cervical laceration is rarely successful, whereas trachelorrhaphy two months later gives excellent results. Injuries to the fornix and vagina are treated according to their depth. If superficial, they will heal quite readily, leaving more or less scar tissue, if strict aseptic care is employed until the tenth day.

In cases in which I can put in a fine catgut stitch, without leaving any small pockets, where the accumulating and putrefying lochia may act as a commencing nidus for producing sapraemia, or what is much worse, puerperal septicaemia, I do so, but if they are deep, I begin on the second day by irrigation, and with the aid of a speculum place in them iodoform or sterile gauze, which is renewed daily. In this way they heal by granulation.

The two-bladed speculum is not applicable in shallow vaginal tears, as distension of the mucous membrane prevents recognition of them.

When I encounter cases of relaxation of the pelvic floor, in which the submucous muscles and fascia have been lacerated without any surface injury, I fully explain the situation before I finish my attendance, warn the patient of the probable consequences if it is not attended to at a subsequent time, and advise the appropriate operative treatment before the uterine displacement and prolapsus have begun to develop.

When the pelvic floor and perineum are torn, my treatment varies with the degree of rupture. If but slight, hardly necessitating a single stitch, I advise aseptic cleanliness, bathing the vulva with an antiseptic solution at regular periods and also after each micturition.

The toilet, after an evacuation, should always be made in a downward direction away from the vulva, and finished with a local bath of antiseptic solution.

To be Concluded Next Month.

Medical Miscellany

A Diagnostic Chart of Tumors and Pseudo-Tumors.

Battle & Co. have just issued a complete and unique chart on the above subject, compiled by Dr. Edward C. Hill, from standard works on surgery and pathology. The subject matter is divided into solid neoplasma (subdivided into benign and malignant growths), and true and false cysts. The general characteristics of each division are given, and their 24 classes, embracing over 100 varieties, are compared critically in columns under the following headings: Tissue, Topography, Number, Size, Conformation, Color, Consistence, Nobility, Sensibility, Surrounding Tissues, Occurrence, History of Growth, and Miscellaneous Points. Features of special differential value are emphasized by the use of italics. This chart shows almost at a glance for ready comparison all that could be learned in a diagnostic way from the perusal of hundreds of pages of ordinary text. It stands indeed to such books as an atlas does to a gazetteer. This very convenient and valuable compendium is at the command gratis of every practitioner of medicine, who will take the trouble of writing a postal card to Battle & Co., 2001 Locust St., St. Louis.

The Treatment of Symptoms.

In a highly interesting article on this subject, Walter M. Fleming, A. M., M. D., of New York City, uses the following language:

"Long experience in the treatment of diseases in their incipiency, evidences beyond all debate, that almost invariably, the attack in a large proportion of cases is inaugurated by febrile symptoms of greater or lesser severity. Also, it may be noticed that constipation or torpid inactivity of the bowels prevails. Therefore, the first indication in the incubation or incipiency of the attack, of almost any form or nature, is primarily to allay the fever, pain, nervousness and solicitude of the patient, and secondarily to empty the alimentary canal. These two ends being accomplished, a long advance towards a possible abortive issue of the attack has been made, or in any event, the first indication and requirements are fulfilled, in proper progress toward a cure.

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It Is a Bad Habit

To whip up the waning physiologic functions of elderly people with strychnine or alcohol; after a short time the deleterious reaction is more certain than the primary stimulation. These patients need help of a character not furnished by a powerful stimulent—their functions need gentle reinforcement and, experience proves, the best agent for this purpose is Gray's Glycerine Tonic.

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Another strong reason for the use of Gray's Tonic in elderly people is that it wards off the tendency to inflammations of the respiratory organs; this fact has been noted and commented upon for many years past and is doubtless due to the fortifying action of the remedy upon the general constitution and its specific influence upon the respiratory tract.

Experience shows that it is good practice to administer Gray's Tonic to all patients in whom are noticeable the symptoms due to advancing years. The absolute freedom of the remedy from depressing or other detrimental reaction makes it the safest and most preferable means of combating the exhaustion and enfeeblement of age.

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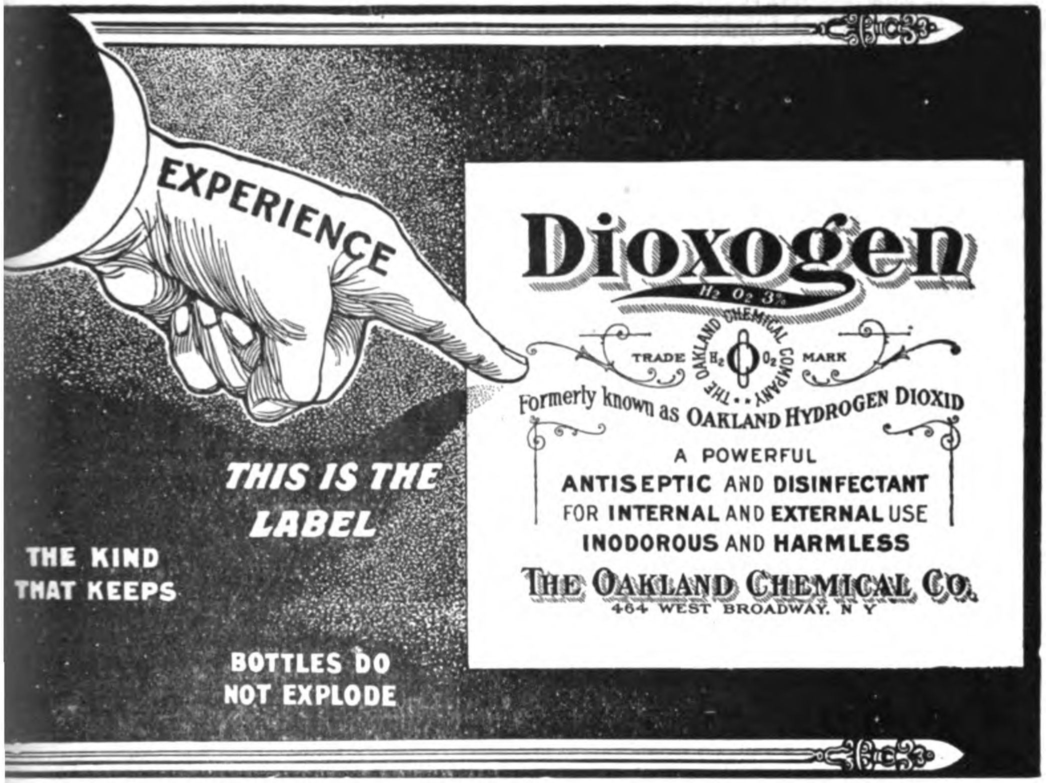

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Medical Miscellany

A Hospital for Bloodless Surgery.

The Lorenz Orthopedic Hospital of New York City has asked the State Board of Charities for its approval of its incorporation. It is the intention of the incorporators to establish an institution for the care and treatment of cripples, and especially for the introduction of the Lorenz method of treatment of congenital dislocation of the hip. The incorporators are: William S. Brewer, Franklyn S. Sylvester, D. Baldwin Sanneman and Benjamin J. Curtis, of New York.

"Chloroformin Puerperal Eclampsia."

Douglas H. Stewart, in the Medical News, declares that the use of Chloroform in this condition is judicial. He says that it is known that the reaction of decomposing alkaline urine is due to ammonium carbonate. One of the elements in the complex picture of eclamptic toxemia is ammonium carbonate, which results from uresa transformation, and which among other salts is responsible for convulsions occurring in eclampsia.

Chloroform produces a temporary glycosuria. If we admit the presence of sugar in the blood it can be shown in the laboratory that sugar prevents the transformation of urea into ammonium carbonate. It would seem to the author then, that chloroform is the ideal anaesthetic, not that it will prevent the formation of all the poisons in the toxemia, but that it will prevent the production of the foremost one.

Chloride of Ethyl as a General Anaesthetic.

is given favorable mention in the January number of the Boston Medical and Surgical Journal. The author, C. G. Cumpton, asserts that it can be administered at any period of life and is especially useful at the extremes of life. He recommends its use in examinations and in short operations, such as arthrotomy, opening an abscess, deep cauterization, curettement of the uterus and in many fractures and dislocations. Throat specialists find it very advantageous. Its administration is attended with no difficulty and an experienced anaesthetist is not required.

When used as a preliminary step in etherization the period of excitement is avoided and the amount of ether required to complete the anaesthesia is reduced one-third.

It is claimed by the author that the liability to post-operation shock is diminished and that nausea and vomiting occur less frequently when consciousness is regained.

The Use of the Automobile.

The abuse of the automobile has been reprobated in the severest possible language by the Medical Record and by other journals. It must not, however, be surmised that because the automobilist has in many instances gained for himself a bad name, by his careless disregard for the rights of others, that lay or medical journalists are unconscious of the undoubted uses of the automobile. This form of locomotion is assuredly destined to play a great part in solving the problem of quick transportation. Medical men of all classes of the community will probably be the greatest gainers by the successful development of the automobile. The Medical Record of April 1, 1899, acknowledged this fact editorially, and predicted that the day would come when the motor car would be considered almost indispensable by the busy physician.

The Lancet of March 20, 1897, said: "It seems that motor carriages should prove especially useful to the general practitioner, and particularly to the country one, upon whose shoulders the burden of maintaining the two or three horses, with their attendant expenses, falls very heavily. At present the initial cost is large, but, on the other hand, the cost of working them is small, and the country roads of England, unlike those of America, are peculiarly well adapted to their use."

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